INFORMATION ARCHITECTURE

COURSE CODE: 9203   UNITS: 1-9

STUDY GUIDE

BS-LIBRARY AND INFORMATION SCIENCES

AIOU website: https://aiou.edu.pk
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**Department of Library and Information Sciences
ALLAMA IQBAL OPEN UNIVERSITY**

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Course Organization

This course has been organized in a way to help you in completing your required course work. There are nine units in this course. Each unit starts with an introduction, which provides an overall overview of that particular unit. The introduction part is followed by objectives in each unit that shows the basic learning purposes. Similarly, the rationale behind these objectives is that after reading unit a student should be able to explain, discuss, compare, and analyze the concepts studied in that particular unit. Hence, this study guide is intended to be a concise appetizer and learning tool in which the course contents are briefly introduced.

This study guide is based on prescribed reading materials. For each unit, these prescribed reading materials have been classified as compulsory readings and suggested readings. Students are bound for studying these materials so as to have successful completion of the course. After the section of 'suggested readings' few self-assessment questions and activities have been put forth for the students. These questions are meant to facilitate students/you in understanding that how much student/you have learned.

For this course, a workshop and tutorial support will be provided as per AIOU policy. So, before going to attend a class, prepare yourself to discuss course contents with your tutor. There will be 70% compulsory attendance in every workshop. After completing the study of first 5 units the 'Assignment No. 1' is due. The second assignment that is 'Assignment No. 2' is due after the completion of next 4 units. These two assignments are to be assessed by the relevant tutor/resource person. Students should be very careful while preparing the assignments because these may also be checked with Turnitin for plagiarism.

Course Study Plan

As you know the course is offered through distance education so it is organized in a manner to evolve a self-learning process in absence of formal classroom teaching. Although the students can choose their own way of studying the required reading material, but advised to follow the following steps:

Step 1: Thoroughly read description of the course for clear identification of reading material.

Step 2: Read carefully the way the reading material is to be used.

Step 3: Complete the first quick reading of your required study materials.

Step 4: Carefully make the second reading and note down some of the points in notebook, which are not clear and needs fully understanding.

Step 5: Carry out the self-assessment questions with the help of study material and tutor guidance.

Step 6: Revise notes. It is quite possible that many of those points, which are not clear and understandable, previously become clearer during the process of carrying out self-assessment questions.

Step 7: Make a third and final reading of study material. At this stage, it is advised to keep in view the homework (assignments). These are compulsory for the successful completion of course.

Assessment/Evaluation of Students' Coursework
Multiple criteria have been adopted to assess students' work for each course, except Research Project/Project, as under.
(a). Written examination to be assessed by the Examination Department, AIOU at the end of each semester = 70% marks (pass marks 50%). AIOU examination rules apply in this regard.
(b). Two assignments and/or equivalent to be assessed by the relevant tutor/resource person = 30% marks (pass marks 50% collectively).

All the matters relating to Research Project/Project will be dealt with as per AIOU rules. However, the pass marks for Research Thesis is 50% both in evaluation of research report and viva voce examination separately.

Course Introduction
This course is of three credit hours and contains nine units. The introduction provided at the start of each unit, which summarizes contents within that unit. Students should study this carefully so as to have idea of the syllabi and prepare themselves for the solution of assignments, assessment questions, activities, and final examination. A brief introduction of the whole course is provided in the following paragraphs.

Information architecture (IA) focuses on organizing, structuring, and labeling content in an effective and sustainable way. The goal is to help users find information and complete tasks. To do this, you need to understand how the pieces fit together to create the larger picture, how items relate to each other within the system.

Information architecture encompasses a broad range of design and planning disciplines, and the boundaries among information architecture, technical design, user interface, and graphic design are necessarily blurred by the need for all of these communities of practice to cooperate to produce a cohesive, coherent, and consistent experience for the site user. Architecture is an appropriate metaphor for the assembling of complex multidimensional information spaces shared by many different users and readers, where the underlying structure of information must first be framed out before more specific disciplines such as interface and graphic design can operate effectively. The user interface and visual design of the site may be much more visible to the user initially, but if the underlying organization of the site and its content is poorly constructed, visual or interactive design will not fix the problems.

According to Peter Morville, the purpose of your IA is to help users understand where they are, what they have found, what is around, and what to expect. As a result, your IA informs the content strategy through identifying word choice as well as informing design and interaction design through playing a role in the wire framing and prototyping processes.

This course covers the about information architecture, understanding people, how people look for info and think about categories, understanding content, content planning and classification schemes, designing an information architecture, testing and communicating information architecture, designing navigation, testing and communicating navigation. Information architecture is a natural fit for LIS curricula. IA is about the organization of information, information technology, usability and user study, information retrieval, and

ultimately, knowledge management. Understanding these skills are critical for LIS students for their professional career development. It is hope that the IA in Librarianship and Information Studies courses do seem to be producing students who are skilled at using the Internet as a research tool. The skills related to IA will enable the LIS professionals to perform their job-related tasks as well as daily life activates in a more professional and better way.

Thus, this course has been particularly designed for library and information sciences students with the purpose to prepare them for their future role in electronic environment. The expected learning outcomes of this course include a combination of knowledge, values, attitudes and skills with a particular emphasis on its use in professional as well as daily activities.

Objectives of the Course

After studying this course, the students will be able to:

1. Explain the concept of information architecture.
2. Describe the importance of information architecture.
3. Discuss the role of information architecture in professional life.
4. Explain information architecture and its different types.
5. Understanding people.
6. How people look for info and think about categories.
7. Understanding content.
8. Content planning and classification schemes.
9. Designing an information architecture.
10. Testing and communicating information architecture.
11. Designing navigation.
12. Testing and communicating navigation.

Recommended Reading

Spencer, D. (2010*). A practical guide to information architecture*. Penarth, UK: Five Simple Steps. Available at https://issuu.com/milko02010/docs/a_practical_guide_to_information_ar

Additional Readings

Batley, S. (2007). *Information architecture for information professionals.* Oxford, UK: Chandos Publishing.

Information Architecture Institute. (2007). *What is information architecture?* Available at http://iainstitute.org/documents/learn/What_is_IA.pdf

Rosenfeld, L., & Morville, P. (2002). *Information architecture for the World Wide Web* (2nd ed.). Sebastopol, CA: O'Reilly & Associates, Inc.

Wyllys, R. E. (2000). *Information architecture.* Available at http://www.ischool.utexas.edu/~l38613dw/readings/InfoArchitecture.html

UNIT NO. 1
ABOUT INFORMATION ARCHITECTURE

1.1 Introduction

Information architecture is all about organizing content or things, describing them clearly and providing ways for people to get to them. A lot of information architecture work relates to websites and intranets, but is just as relevant for music and movies, a computer file system, your paper files at home or even groceries on supermarket shelves. Good information architecture helps people to find information they need. It can also help them learn and make better decisions. You need to understand three things to create a good information architecture: People, content and context. The term is often abbreviated to 'IA'.

Imagine your local supermarket/grocery store has just been renovated. The owners have expanded it to include more items, and improved the layout so you can move around more easily. Moreover, you are seeing it all for the first time. You walk in craving chocolate, head to where it is usually kept and realize that, wow, everything has been moved. Yikes! How can you quickly make sense of it and find the chocolate? After all, you do not want to check every item on every shelf. You look at the signs, but they all point to where stuff used to be. No help there. You start looking up the corridors. No, this corridor is all canned food... this one is soft drink... this one is bread...

Aha! Here is one that looks like it is full of sweet things (the bright colours and everything at children's eye level gives it away). You decide to give this one a go. In addition, lo and behold, there is the chocolate.

Why was this relatively easy, even though they had moved everything around? It is because **they put similar things together into groups**. Moreover, they put those groups into bigger groups, and those groups into even bigger groups. Therefore, they put all the chocolate – dark, light, white, bars and pieces – together. Then they put it near other sweet things, which are also arranged into groups of similar items. Therefore, when we glance down the corridors, we can quickly figure out what the whole corridors is about.

Now let us extend that idea to our websites, intranets and other information systems. We could just list everything we have on the home page, but we usually do not. Instead, we put our content into groups, break those groups into sub-groups, and so on. This is much easier to use than showing all our content in one long list.

However, it is not just grouping items that make supermarkets and websites work well. It is about creating groups that **make sense to the people who use them**. After all, supermarkets could group by colour, or even where things were made. They could put the chocolate with the gravy and other things that are brown. They could put the Swiss chocolate with the Swiss cheese, and the Belgian chocolate with the Belgian beer. Nevertheless, as tempting as that may sound, most times it will not help anyone find the chocolate in their newly-renovated supermarket.

Even when we create categories that make sense to people, we need to describe them well. So no seacláid signs in a supermarket full of non-Irish speakers, or aisles called Sweeties Treaties. We also need to help people find their way to the thing they want. In the supermarket this can be done with layout, signage and visual guides; on websites we use navigation bars, buttons and links.

And that's what information architecture is all about:

- Organising content or objects.
- Describing them clearly.
- Providing ways for people to get to them

1.1.1 Where we find information architecture

While most information architecture work these days is used for websites and intranets, you can find it wherever you need to organise things (information and/or objects) that other people need to use. So, it is just as useful for figuring out how to organise your music and movies, your file system at work, and even physical things such as your paper files at home or groceries on a supermarket shelf.

To be successful, you need a diverse understanding of industry standards for creating, storing, accessing and presenting information. Lou Rosenfeld and Peter Morville in their book, *Information Architecture for the World Wide Web*, note that the main components of IA:

- **Organization Schemes and Structures**: How you categorize and structure information
- **Labeling Systems**: How you represent information
- **Navigation Systems**: How users browse or move through information
- **Search Systems**: How users look for information.

1.1.2 Why information architecture is important?

Information architecture has always been important. Whenever we create groups and describe things other people need to use, the information architecture (how things are grouped and labelled) directly affects how easy things are to use. As the amount of information available to us keeps growing, information architecture becomes even more important. The more information there is, the harder it can be to sift through and find what you need. Good information architecture can help people find their way through the information, and ignore what is not relevant. But good information architecture can do more than just help people find objects and information. It can empower people by making it easier for them to learn and make better decisions.

So what is a good information architecture? It is one that is both easy for people to understand and works well for whatever is being grouped. A bad one is just the opposite – it is hard for people to use, and the content does not easily fit. For example, an online supermarket with a good information architecture may put all the chocolate together and group it with other snack foods. One with a bad information architecture may group all grocery items by manufacturer, making people check every manufacturer to see who produces chocolate.

This is not easy. For any set of things:

- There will always be more than one way of organising them.
- Unfortunately, it is not always clear which way is the best way.
- People have different needs.
- People often have different ideas about what goes together and what does not.
- Some people may know a lot about a topic, while others may know nothing at all.

As you can see, three of these reasons relate to people. If you are organising things that will be used by other people, you will need to do it in a way that makes sense to them – that fits with their idea of what goes together, and is described in a way that makes sense to them. This can be easy if they think the same way as you, but that is rare – I have only worked on a couple of projects for people just like me. It is far more likely that whoever is using your information will think differently to you – sometimes very differently.

1.1.3 What you need to create a good information architecture?

In order to create these systems of information, you need to understand the interdependent nature of users, content, and context. You need to understand three very important things before

you can design an IA that works really well. Rosenfeld and Morville referred to this as the "information ecology" and visualized it as a Venn diagram. Each circle refers to:

- **Context**: The business or personal goals for the site, who else will be involved and what your constraints are business goals, funding, politics, culture, technology, resources, constraints
- **Content**: What you have, what you should have and what you need (content objectives, document and data types, volume, existing structure, governance and ownership)
- **People**: What they need do to, how they think and what they already know (audience, tasks, needs, information-seeking behavior, and experience). Without a good understanding of these three things, you simply cannot create a good IA.

Figure 1 – 1. IA is all about meeting the needs of people, content and context

1.1.3 Information architecture in a Project

Imagine you have just been asked to be responsible for the IA of a new website or intranet. What might that mean?

I have worked on many IA projects – for small sites and large, for new sites and redesigns. Although they differ in the details, they all follow the same basic approach.

Kickoff

Project definition & goals

Context. Technology, design, culture, stakeholders

Research

User research (people)

Content

Figure 1.2 *The basic parts of an IA project*

The first part of a project is always to figure out exactly what is involved – to define what the project is about, identify the goals and anything else that will affect it (the context) such as:
- the technologies you may have to use
- any design constraints
- the culture of the organization (how things get done in that organization)
- who should be involved (the stakeholders)

An IA is often made up of the following parts:
- Defining what the project is about and its goals
- Researching people and content
- Designing the IA, navigation, visual approach and content
- Building and testing
- Maintaining
- The main IA deliverables in a project include:
- The information architecture
- Navigation
- Metadata

The length of each individual project varies, from as little as a day, to as long as a year, depending on how much you know up front, the size of the project, your experience and how many people are involved.

1.1.4   Who does information architecture?

All sorts of people can be involved in IA, including business analysts, usability specialists, graphic designers, writers, web developers, project managers and even information architects.

The skills that help most with IA work include empathy with people, language, ability to synthesize different types of information, attention to detail, great communication skills.

1.1.5   What's an information architect?

A person with a title of IA will usually do arrange of things. Of course, they will be primarily responsible for designing:
- The IA: The overall structure of the site, groups, sub-groups and labels

- Navigation: Navigation bars, links and other ways of getting people to information (e.g. A-Z indexes, search)
- Documentation: Writing it all down (or communicating it in another way) so it can be built
  They may also be involved in:
- User research: Understanding what information people need, how they may approach it, and how they think about groups and concepts
- Usability testing: Making sure the IA, navigation and other aspects of the project actually work for people
- Other interface and interaction design, such as the interfaces for web-based applications
- Creating prototypes for communication and testing, and depending on the project, they may be involved in:
- Identifying site strategy and goal
- content writing
- Search engine optimization (SEO) (This is coming up in more and more job descriptions as people realize IA can have a big impact on SEO).

1.1.6 Information architecture for things other than websites
   IA is not just for websites and intranets, and is relevant to anything with a menu, software, web applications and mobile applications. It also includes applications that collect or process a lot of data, any system that involves classification of information and mobile applications.

1.1.7 Before you start IA project: Context
   Before starting a project, you will need to find out all about the context of the project, including:
- What the project goals are. These may already be defined, or you may need to help figure them out.
- The technology you will be using, what it does well and what it does poorly.
- Any existing design constraints and requirements you have to work within.
- The culture of the organization, and how will you be allowed to communicate with people.
- Who is, and who should be, involved in the project.

1.2 Objectives
After reading this unit you will be able to:
- Explain what is the information architecture?
- Explain why information architecture is important?
- What you need to create a good information architecture?
- What is the role of information architecture in a Project?
- Who does information architecture?
- What is an information architect?
- Information architecture for things other than websites.
- Explain before you start IA project: Context

1.3 Self-Assessment Questions
Q.1   What is the information architecture?
Q.2   Explain why information architecture is important?

Q.3 What you need to create a good information architecture?
Q.4 What is the role of information architecture in a Project?
Q.5 Who does information architecture?
Q.6 What is an information architect?
Q.7 Elaborate the context of IA project.

1.4 Activities
- After reading this unit, discuss the common elements used in all websites.
- Keeping in view the important role of IA in a website, develop an IA project for academic library having the main features, contents, structure, overall design and branding of website.
- Do identify the context of a business IA project and its basic requirements.

UNIT NO. 2
UNDERSTANDING PEOPLE

2.1 Introduction (Learning about your Users)

User research is an important part of any project. For IA work you can learn all about the types of information people need, how they use it, where they use it and how they think about it. This helps you to select content they need, make sure it is useful and easy to understand, and is organized in a way that makes sense. Planning for user research involves figuring out:

- What you want to learn?
- How much research to do?
- Who to research?
- Who (from your team) to involve?

2.1.1   What do people need?

One of the main things you will learn from user research is what information people need or are looking for. You can learn this by asking people directly what they use and/or look for. You can also do it by looking at their existing behaviour, such as what pages are already popular. Understanding people's needs helps you:

- Assess existing information to make sure it meets key needs
- Identify information gaps
- Make key information easy to find
- Priorities content activities – release or rewrite the most important pages before the least important

2.1.2 What do people do with information?

Beyond knowing what information people need, it is vital to find out what they do with it. People rarely want to just 'find' information – they usually want to do something with it as well. They may want to grab a fact, or dive in deep and learn everything about a topic. They may want to filter a big set of products and then compare items. They may need to send it to other people, save it for later, or copy a part of it into a report. They may even want to print it!

People may also read your information before taking another step in a process. For example, they may need to check system requirements before downloading software, read the product description before adding it to their shopping cart or looking at similar products. You need to know what their next step is so you can help them take it easily.

2.1.3 Where do they use it?

Sometimes knowing where people use information may be important. Will they be in an office with a large monitor, good lighting and plenty of time to read? Or will they be using a mobile device with a small screen in bright light? Knowing this could really change the amount and type of information you provide. You may even decide to provide the same content in different ways for people to use in different locations.

2.1.4 What do they already know about the topic?

Everyone starts with some level of knowledge about a topic. The audience may know very little about the topic you are presenting. If so, you will want to know how much they do know and create ways to get them up to speed quickly. Or they may know a lot about the topic –

maybe even more than you if it is legal, scientific or something technical. You will need to work out how to give them what they need without basic information getting in their way. Most likely you will find that some people know nothing about what you are working on, while others will know a lot. This is common. It sounds tricky to design for, but if you get to know both groups well, you will see opportunities to meet everyone's needs in an elegant way. How they think about the information – their current opinion or feeling about it – may also be important. For example, people may be more interested in getting a refund than paying a bill, and will be willing to spend more time learning how to do it.

2.1.5 What do they already know about the technology?

If you think you will be doing something new (or newish) with technology, or if you know some people may not be comfortable with new technology, you will want to learn how much experience they have.

2.1.6 How do they describe things

One of the most important things you will learn from user research, and one you cannot get any other way, is the terminology people use and the way they think about concepts. This is so important to know that you will use it over and over again as you work. You will use it when deciding what information to group together (people talk not only about objects but also concepts and groups), what to call your navigation items, and how to phrase ideas in content.

2.1.7 Collecting information about people – how to?

Before you start the process of learning about people, think about what you want to learn and why you want to learn it. This will help you decide who will be involved, the types of activities you will do, the size of your research project and whether you run it as a formal research project or something quite informal. User research can help you find out a range of things – from learning broad patterns of behaviour to help you identify opportunities for new products, to getting a detailed understanding of how people do a particular activity. That is why it is so important to figure out exactly what you want to learn.

2.1.8 What questions to ask

As described some of the things you can learn from user research. Now you will need to think about which of those things you actually need to know. You may not need to know which content people use most often – you can look at your web analytics for that. But you may want to know what they feel is missing, or how good the quality of the existing information is.

Sometimes, when brainstorming with a client, I play a modified '5 Whys' game. For example, thinking about the UX Australia website:

- What is something we know people want from the website? They want to see what presentations will be at the conference.
- Why do they need to do that? So they can make a decision about whether to come.
- Why do they need to do that? Because there are a lot of conferences they could attend.
- Why do they choose one over another? I do not know.
  As you could imagine, knowing that could help us express our information in a way that will help people make that decision – even if they decide our conference is not for them.

2.1.9 How much research to do?

The biggest decision you will make is how much research you actually need to do. Sometimes we just look at existing web analytics and customer queries, and then chat with a few people already using the site. And that may be enough to let us know who we designing for and what their main issues are. But sometimes we will run an extensive research project, involving a range of people from different roles and demographics who are all trying to do different things.

Some key factors when making this decision: How much do you already (really) know about your audience? Do you hang out with them all the time, or have you never met them before? What are the consequences of getting it wrong? If you make a mistake from a lack of information, can you fix it up pretty quickly (change a label, move some content around) or will it be a major change (a complete revision of the IA)? How much money is involved? Again, if you make a mistake from lack of information are you throwing away a few hours work or millions of dollars? How quickly do you get feedback? If you do something silly, will you hear about it immediately (and be able to fix it immediately) or will you lose thousands of customers before you even know what has happened? The favorite way is to study existing information, talk to a few people and then decide whether we know enough or need to continue. We may find we have identified the key points already, or we may need to do more research.

2.1.10 Who to research?

One of the first questions to answer is just who you need to learn about. If you are trying to make improvements for existing customers, you will want to talk to them. If you are trying to attract new customers, you will want to find potential customers and talk to them. If you are working on a corporate intranet, you may need to talk with people from a wide range of roles and areas across the organization. One common mistake, particularly in corporate projects, is talking only to managers. That is fine if you are designing something only the managers will use. But if non-managerial staff will use it as well, you will really want to talk to them. You will not get the same type of information by talking to their managers.

2.1.11 How to find them

After figuring out who you need to involve, the next step is to find them and arrange for them to be involved. How you do this will depend on the amount of research you want to do and how well-connected you are to your audience. Here are some ways to go about it.

2.1.11.1   Formal recruiting

Market research companies have long lists of people interested in being involved in research. You give the market research company a detailed description of who you want to talk to – age, income, role, location, etc. – and they will find people for you and schedule them. You usually pay per-head according to how many participants you need to involve. Many companies will also hire out facilities such as meeting rooms. If you are going down the more formal path, you should seriously consider this option. Although it may seem more expensive to begin with, do not underestimate how much time it can take to contact people, invite them and follow up to make sure they turn up.

2.1.11.2   Informal Recruiting

Informal approaches to recruiting usually involve asking people you already know. Talk to family and friends, ask on Twitter, look for Facebook groups around your topic. See if you

already have mailing lists of people you can contact. An informal approach is a particularly good way to find people for intranet work. You can call for volunteers, phone people from across the organisation or ask your colleagues for recommendations.

2.1.11.3 Online recruiting

If you are working on an existing site, try recruiting via the site. If you have a site or product that people already like or depend on, they may be happy to help you make it better.

2.1.11.4 Who else to involve

If you are working in a team, try to get as many as possible involved in the research at some point. In particular, involve anyone who will make design decisions that will affect people – they will all benefit from meeting some of the people they are designing for. They do not have to attend every research session, but they should be there for at least some of them. This is a much more effective approach than having people read a research report or attend a presentation – meeting actual customers makes it much more real.

2.2 Ideas or numbers (qualitative or quantitative)

Also think about whether you need to collect mostly qualitative research (ideas, behaviors, observations) or mostly quantitative (statistics, counts, etc.). This will affect not only how many people you involve, but also the way you collect information. For example, qualitative research is best collected via interviews, focus groups and observation, while quantitative research is better done with surveys or analytics. You do not need to choose one or the other – using both gives you insights into different aspects of your research question. And sometimes one type of research reveals insights that need further exploration via the other.

2.3 User research methods

You can learn about your users in lots of different ways. For some you can use information you already have, while for others you will collect new information. All have their advantages, limitations and things to watch out for. Always use more than one of these methods. It makes it easier for you to identify the main issues as you will see them come up from a couple of sources. It is not hard to use more than one, and it will give you confidence that you are seeing real issues, not just a strange result from some bias in one method. This diagram shows the methods you can use, depending on to the type of involvement you have with people, and the way you collect the data:

- Direct collection involves some type of face-to-face activity between you and the research participant. The biggest advantage of all direct research methods is that because you are with the participants, you can explore any issues of interest as they arise.
- Indirect collection is done without any face-to-face contact with the participant. These methods often have one big advantage: they can collect a lot of information.
- Self-reported methods rely on the participant telling you what they think they do. These methods can involve a big bias because people are not particularly good at knowing how or why they do something (or even what they do).
- Observed methods involve seeing how people actually do something, and their biggest strength is their authenticity – all the behavior is real.
  The different aspects are why we always use more than one method – each from a different part of the diagram.
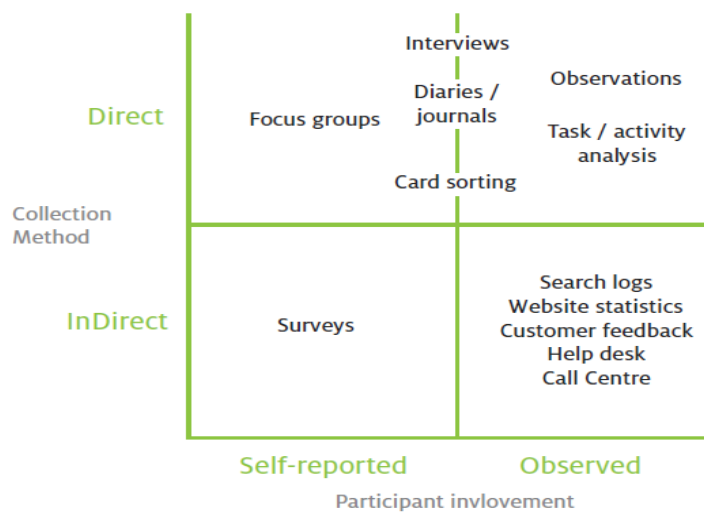
Figure 2.1 Users' research methods

2.3.1 Interviews

Interviews are one-on-one discussions with people, usually conducted in their normal environment. They may also involve watching people going about their normal tasks. Interviews are a great way to gather rich, targeted information about the issues affecting your project – the context people work in, their tasks, their skills and their information needs. Interviews can also be very flexible, letting you explore issues and tangents as they are discussed. It is a good idea to conduct them in the person's normal location so you can combine the discussion with examples. They can quickly show you what they are describing to help you understand their needs. Interviews do not always need to be face-to-face. You can often do them remotely with screen-sharing technology and a phone call. If you would like to make interviews more practical, and less of an abstract discussion, include practical activities such as brainstorming, card sorting (see below) or other design games. The main disadvantage of interviews is they can be time-consuming – to organize, run and analyze.

2.3.2 Focus groups

Focus groups are small group discussions with people, usually conducted somewhere outside a normal work environment such as a meeting room or research facility. Focus groups are good for eliciting feelings and opinions about an issue, but not so good at getting practical details, unless you include activities designed to get more realistic information. One advantage of focus groups over interviews is that you can involve more people in a fixed amount of time.

2.3.3 Observation

Observation is all about watching people doing their normal tasks. It is particularly good when you cannot talk to someone while they are doing something – for example, call centres, data processing centres or situations that move at a very fast pace. Observation sessions are usually more immersive than interviews, and you may spend a lot more time learning about a situation. The advantage of observations is you get to see how things really happen, which can be quite different to how people say they happen.

2.3.4   Diaries and journals

Diary studies are a way to get information about things people do, without having to be around to observe them. Figure out what you want to learn, and come up with a way of asking people to record that information. For example, if you are interested in learning what types of things people search for on an intranet, you could ask them to jot down what they were looking for and why every time they do a search. Diary studies can be good for getting big picture insights for a project, or for collecting detailed information you couldn't get during an interview.

2.3.5   Card sorting

Card sorting is a practical way to get information about how people think about content and categories. You provide participants with index cards on which content ideas are written and ask them to group the cards in ways that make sense to them. When they finish, ask them to write a short description of each group of cards. From this, you can learn about how people think about groupings within content, and what content goes well together. This will help you later on when you are designing the information architecture.

2.3.6   Surveys

A survey is a set of questions you ask people to complete. The questions can be quantitative (with closed questions that can be statistically analysed), qualitative (with open text-based questions) or a combination of both. You can use them to collect information about how people use something, what they may need in the future and other issues of interest. Surveys are good for gathering a large number of responses with little effort. You can also use them to compare before and after by asking the same questions.

The disadvantage of surveys is the data you collect can lack richness, even if you ask for open-ended text responses. Surveys do not give you the opportunity to probe more deeply about a particularly interesting comment, or to ask the respondent to show you an example.

2.3.7 Existing data – site statistics, search terms and internal knowledge

You can learn a lot about people without talking to them. Here are some information sources you may already have access to – and they are free.

- **Website statistics**• can give you data about the content people are already using, the most popular areas of the site, and the content people are not using.
- **Search terms**• (from an internal search facility and external search sites) can give you an insight into key information needs and how people describe their needs.
- **Customer emails, letters, forums, call centre logs** and **help-desk queries** can also give you useful information. They can, however, contain bias. Customer emails, call centre logs and help-desk queries often over-represent new or inexperienced people. Website logs only show what happened, not why it happened.

2.4 Tips for collecting research

Here are some tips for collecting user research:

- Have a go at it. Even if you have never done it before, do not be scared. You do not have to run an academically-rigorous research program. You just want to learn some interesting stuff about your audience, and not make stupid design mistakes.
- If you do interviews, focus groups or observations, record them with an audio recorder   (or video if you like). Later, create a lightly edited transcript of the session (one with the

'umms','ers' and personal comments removed). It is important to capture the interviewees' words as they say them – if you try to take notes, you will change the terminology into your own or interpret what people have said as you write it.

- For other techniques, capture the data as close to its raw form as possible. For example, collect individual survey responses (not aggregated statistics), detailed search terms (not just the top 20) and full email messages (not just subject lines).

2.5 Analysing User Research

After collected some user research. The next step is to analyze what you have collected so you can identify the key issues and be confident about what you have learned. Surprisingly, a lot of people forget this step and just run with top-of-mind observations. If you do not analyze your information it is really easy to just spot the things that were most important to you (such as something unexpected), or to see patterns that do not exist.

2.5.1 The purpose of analysis
- identify consistent issues
- identify patterns of behavior
- figure out which issues you are
- keep track of insights and idea

2.5.2 Analysis steps
Any analysis process can be broken down into these parts:
- Prepare: Get your data and materials ready.
- Deconstruct: Pull the data apart so you can look at it outside its original context.
- Manipulate: Once you have deconstructed your data, it is easier to identify patterns by playing around with it. As you manipulate it, you will see patterns and issues more easily.
- Identify: Gain insights, start to generate ideas and check that the data supports your ideas.
- Summarize and communicate: Write down what you learned and tell other people.

2.5.3 Preparing for analysis
When you plan to collect user research, make sure you schedule in some analysis time. You may not need a lot, but having it in your schedule means you will be less likely to forget. Then get all your data in order. Depending on the method you use (we discuss a few methods below) you will need to do different things to prepare the data.
If you are working with a team, it is a great idea to do the analysis process together. Involving key people during the process is easier and more effective than telling them what you learned. And the experience of talking through the analysis makes it much more real. This is especially important if the person designing the IA and page layouts was not involved in the user research.

2.5.4 Methods
Just as you should use more than one method for user research, it is good to use more than one method for analysis. They each offer a different way of learning about what you have. Here are five different methods you can use.

2.5.5 Exploring the data

One of the easiest analysis methods is to just immerse yourself in the data and explore it a little. This gives you a feel for the type of information you have and the very high-level patterns. The favorite way of doing this is to drop everything into a spreadsheet with columns labelled source, tag and comment.

After you have recorded a mass of stuff into a spreadsheet, start coding the data with simple tags (keywords). Tag each line with whatever comes to mind. Do not worry about creating a complete or consistent set of tags – you can go back later and revise them. You usually have to go through mine twice and fix up some tags in the earlier data to match how you have tagged data later in the spreadsheet. You usually need two columns of tags – one to record the topic of the line item, and the other to record something like how people use the data. Do not worry too much about my way though – let your data guide you. Now, start exploring the data. Sort it by tags so similar ideas are grouped together. Look at each one for basic patterns and interesting issues. You will be able to identify key information needs, the issues mentioned most frequently, how people described similar needs (they may have done it in different ways) and whether there was consistency between sources.

	A	B	C	D	E
1	Source	Tag	Tag	Comment	Search frequency
2	Interview1	schedule		I looked at the conference schedule a little bit	
3	Interview1	reporting back		I asked my team to find out sessions they want me to attend	
4	Interview1	social		done a lot of unrelated to the conference background prep	
5	Interview1	touristing	food	researching restaurants	
6	Interview1	money		I called my bank and let them know I'm travelling	
7	Interview1	schedule	printed	I downloaded the program and I probably will take it with me on the plane	
8	Interview1	sessions		will probably look at the conference schedule and do a rough plan	
9	Interview1	workshops	description	looked descriptions for the workshop	
10	Interview1	workshops	presenter	I also used my personal understanding of people to choose a workshop	
11	Interview1	blogging		I also got a username sorted out for the blog. I'll use that a bit	
12	Interview2	schedule		Haven't looked at the schedule yet	
13	Interview2	sessions	decide close to time	I think I will decide in the morning	
14	Interview2	sessions	slides help	to see the slides of the presentation, it helped me a lot	
15	Interview2	flights	company booked	My company booked the plane for me	
16	Interview2	accommodation		And I booked a hotel – not the conference hotel	
17	Interview2	touristing		I'm planning on staying two more days in city after the conference is finished	
18	Interview2	touristing	city important	so it is great that the IA Summit is in city It is a great opportunity for me to go to the conference and see the city.	
19	Interview2	workshops	description	I just read the description and the titles of each workshop	
20	Internal search	schedule		program	26
21	Internal search	costs		costs	21
22	Internal search	schedule		timetable	15

Figure 2.2. Exploring the data with a spreadsheet

2.5.6 Term analysis

Term analysis is a technique used to learn about terminology and understand how people describe ideas. Choose something you want to know about, and use your research notes to see how they describe it. Look for:

- words used to describe the concept
- synonyms (words with the same meaning)
- antonyms (words with the opposite meaning)
- related concepts
- broader and narrower terms
- concepts frequently mentioned together

2.5.7　Affinity diagramming

Affinity diagramming is a great team analysis activity. To start, each person in the team goes through the research (transcripts, spreadsheets, etc.), identifies issues they find interesting and writes them on sticky notes. Shuffle the notes around, move them between groups, even make new groups, but keep discussing them. As you progress, talk about questions such as:

- What is important about this group of notes?
- Why does this happen?
- What is this group of notes about – what is the underlying idea?

2.5.8　2x2 matrixes

Start as if you were doing an affinity diagram – by writing down interesting ideas on sticky notes (you may decide to colour-code them by participant or some other demographic as an extra level for this technique). Take a first pass through the sticky notes and identify two different dimensions to use – these will come out of the data, and could include things like:

- How often the participant uses the site?
- How experienced the participant is with the product?
- How familiar the participant is with the content?
- How they looked for information – searching or browsing?
- Type of task: Were they getting a quick fact or exploring in detail?
- Is the issue about a positive or negative experience?
- How much content would they need to answer their questions?
- Any sort of demographic of the participant?

Plot out the sticky notes according to where they fall on the scale for each dimension, and then discuss what you have found. When you have finished discussing it, find two more dimensions and start again. As with affinity diagramming, the diagram is not the point. it is the discussion and the ability to look at things in different ways that's important.
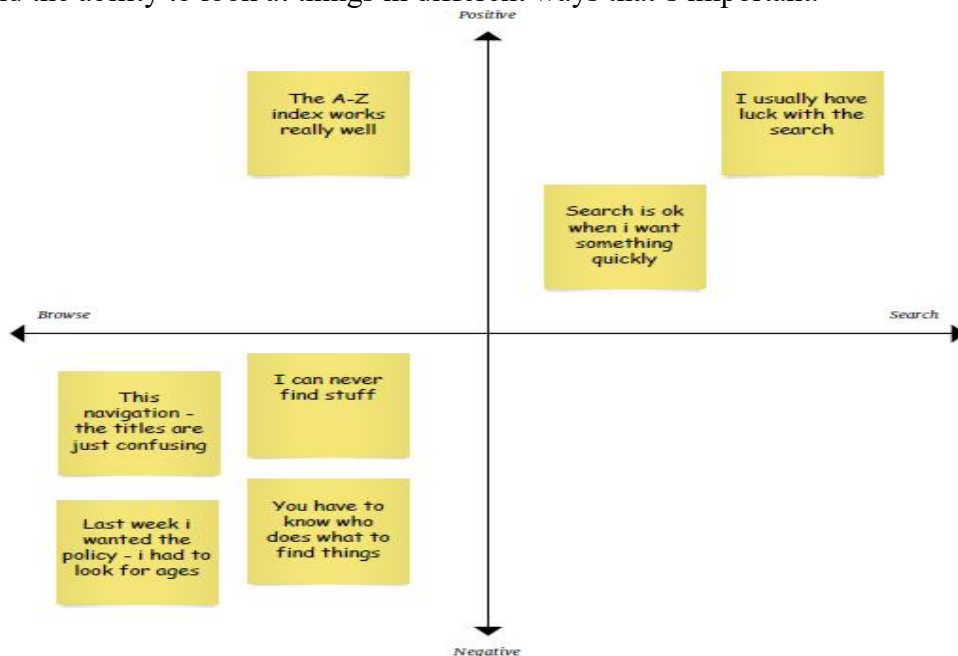

Figure 2. 3 Plotting the research findings on a matrix

2.5.9 Multi-dimensional analysis

As with 2x2 matrixes, identify a set of dimensions to examine (the ones mentioned earlier are a good starting point). But instead of plotting sticky notes on a 2x2, discuss each dimension with your team. For example, if you identify a range of familiarity with the topic, look at other aspects and see if there are differences across people. Do people unfamiliar with the domain use different terms to describe concepts or content? Do they need different types of content? What do very frequent users need (are they returning frequently to keep up-to-date?) compared to medium frequency users (who may be after the same content over and over) and infrequent users (who may just need a fast answer)? Think about how people's needs and experiences differ. When you have examined all you can for one dimension, start over with another. The discussion about people's experiences and needs for each dimension may also suggest new dimensions to examine. This may be less of a diagramming activity and more of a discussion. It can feel a bit directionless for a while, but as you discuss each idea, you will gain a deeper understanding of what is going on.

2.5.10 Tips for analysis

Here are some tips for doing any sort of analysis:

- Do not settle on the first pattern you see. Re-arrange your data using one of the methods above and see if you can find something new.
- Allow time for the patterns to form. Do not just look at it in one sitting – sleep on it and review it the next day.
- These methods are designed for analyzing qualitative information, so you will not get statistics from it. This process is all about understanding the most important issues for your users.
- As you go, keep a note of important issues that come up during the conversation. You may even assign someone to take notes of your discussion.
- For any conclusion, make sure it is actually supported by the data. It is easy to come up with something that is not real.

2.6 Communicating about Users

You have done your user research, and analyzed the data to identify the key things you discovered. The next step is making sure you document what you have learned, and communicate it with others. Documentation is a bit of a dirty word these days, with many web people recommending low-level documentation for projects. One of the biggest benefits of recording research and sharing it around is more people get a good understanding of the audience and their needs. This will help in all sorts of situations:

- When developers have to make decisions about something in the interface (no matter how well you document the IA and navigation, decisions still need to be made) they are more likely to do it in a way that is good for people.
- Managers are less likely to say "My wife/husband/best friend really likes feature x, can we put that on the home page" as they will have a better picture of the real people using their site.
- People in the organization will become more focused on real needs and behavior.
  Writing up the research results helps me verify that the findings from the analysis step are real. Documenting also helps explain why something has been done a certain way. For example, you can use the 'evidence' to show that when someone looks for particular

information they use particular terms. User research documentation does not have to be a big scary report that no-one reads.

2.6.1 Type of document
When deciding what to include in your documentation, and which method to use, you first need to think about your audience – who it is for. Of course, you may need to write for more than one audience, which will mean using more than one approach. For example:
- For future projects, you may want to produce a detailed report about all your findings. While no-one might want to read it now, it could be used when a similar research project starts in the future.
- Managers may just need an overview, and you may choose to do something simple and visual.
- If people in your organization (or your client) have particular opinions about what users want, you may want to focus more on things that will highlight the accuracy or inaccuracy of these opinions.
- If your organization is full of detail-focused people who like to read, provide detail. If it is full of people who are very person-focused, provide stories.
- If this is the first time user research has been presented, and people are skeptical, choose a more conservative type (a report) over a more touchy-feely type (personas, described below). So be user-centred about your documentation. Find out what people are actually interested in from the user research and communicate that.

2.6.2 Communication methods
When choosing a method, consider what people will need from the information. But also let your research guide you – do not decide up front how you are going to communicate. And, do not be tempted to use whatever approach seems to be popular at the moment (personas have been pretty trendy in the past few years). Use the method that works best for your readers and content. And, feel free to ignore my suggestions and make your own up.

2.6.3 Simple research report
One of the simplest ways to document research is as a basic report. it is not shocking, and not many people will read it, but it is a great way to make sure you have recorded a lot of detail. Include background information like the following (which all provide credibility and context):
- How the research was conducted?
- How participants were chosen?
- What participants were asked to do or talk about?
- How many people were involved?
In the main findings section, include things like:
- Key insights (obviously)
- Things that were consistent across everyone
- Any differences you noticed between audience groups

2.6.4 Personas
Personas are representations of individual audience members. They provide a rich description of your audience, and are a great way to keep people in mind during a project and communicating with other team members. As personas represent real people, team members can

easily empathize with them and over time will talk about them as they make decisions about design elements. Personas focus on people's goals and describe their needs.

Personas segment people based on behaviours, goals and needs. For example, two people can be in quite different demographic groups but have the same underlying behaviours and goals. Personas are also different to roles – they are not job descriptions or career roles. Just as with demographics, two people with the same role can have quite different goals. They may have to do the same tasks, but may approach them quite differently.it is important to base personas on user research and not just make them up.

When analysing your research data, focus on identifying key goals that people have. The original persona methodology focused on three types of goal:

- Life goals: personal aspirations of the person, usually beyond the product being designed.
- Experience goals: how the person wants to feel while using the product.
- End goals: actual outcomes from using the product.
- For most systems, end goals provide the most input, experience goals are important and life goals provide a broader context to remember.

2.6.5   Scenarios

Scenarios are short stories that describe someone using a product.

They do not describe the nitty-gritty detail (e.g. the person clicks the 'submit' button), but instead describe the important steps, actions and decision points. They are written before interfaces are designed, so they are independent of an interface.

Scenarios often describe the system being used as a day-in-the-life so important context is clear. They will usually focus on:

- Where will the product be used: Will it be on a fast computer in the office? A handheld device on the street? A child's shared computer?
- Frequency and length of use: Is the task one short, infrequent process (e.g. taking a screen shot of a website and copying into a document)? Many short processes (e.g. reading and answering individual emails)? A long process (e.g. quality checking an insurance claim form)? An ongoing process (e.g. creating an artwork using a software tool)?
- What else is the person doing: Are they checking the status while working on something else, or focused with everything else turned off? Are there a lot of interruptions? Do they have to get up and do something in the middle of the process (system timeouts are terrible in these situations)?
- What other products are being used: Does the person need to copy information between products? Do they need to read a document while filling out a form?
- What are the main activities that need to be done?
- What is the expected end result of the task?
  Scenarios can help describe the requirements in a way business stakeholders understand. They are great for making requirements come to life and understanding the full consequences of decisions. Building scenarios with your team can really help prioritise requirements for the project.

2.6.6   Research quotes

A simple way to communicate user research is to assemble actual quotes from the research into a document, presentation or poster. Use the actual words from participants, without editing.

Group them according to similarity. And make sure they are balanced – include positive comments, criticisms and requests for features and information needs.

2.6.7 Experience map

An experience map is a visual representation of one customer's (or aggregated customers') experience/s with a product. These diagrams do not have any particular guidelines, but most have the following characteristic:

- Time: One of the main focuses of the diagram is how a customer • interacts over time.
- Touchpoints: This diagram often shows how a customer interacts with different parts of a business (website, sales, customer service etc.) and how they connect.
- End-to-end: It usually shows and end-to-end experience.

   An experience map can be done as a before and after. Use one to show how people currently experience your product, service or website (based on your user research) and another to show how they may do it in an ideal future.

2.6.8 Other diagrams

   The top half shows people's needs, grouped according roughly to topic (the colour-coding shows where information came from)

The bottom half shows content for each topic.

This diagram quickly shows what people were interested in and what was available for each topic. In some cases there were user needs but no content, and content without any clear user need (not shown in my diagram). This was a very useful diagram for discussing the outcomes of user research with individual content providers, as they could quickly see how their work connected with the needs of real people.

Figure 2.4. Information needs and existing content, plotted together

2.7 Objectives

The study of this unit will enable you to know:

- about your users learning needs

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- about users do with information
- how users describe things?
- how to collect information about users?
- who to research?
- different research methods (Qualitative & Quantitative) and data analyses techniques
- the various steps involved in research report writing/communicating
- how users look for information

2.8 Self-Assessment Questions

Q.1   Define various types of users and their learning needs in details.

Q. 2 How users describe things? Discuss

Q.3   What is research? Discuss different research methods with suitable examples.

Q.4   What steps are involved in research report writing? Explain.

Q.5   After collecting user research, explain the key issues related to data analysis.

2.9 Activities

- Visit any university/academic institution and ask/collect data from the students about their information seeking behaviors.
- After getting data from the students regarding their information seeking behaviors, report/communicate them according to the given discussion in unit number two.

UNIT NO. 3
HOW PEOPLE LOOK FOR INFORMATION AND THINK ABOUT CATEGORIES

3.1 How people look for information

People do not have an in-built preference to 'search' or to 'browse'. Instead, the behaviors they use to find information depend on the type of task they are doing at the time. This section is about how people go about looking for information, and what you need to consider when designing for different behaviors. (Think of it as background information about your users.). You may have heard the myth about how people either search or browse, but never both. That is, some people will always search while others will always browse. The decision to search or browse has much more to do with the information task people are trying to perform. Following are some common information-seeking behaviors:

- known item
- exploratory
- refining and narrowing
- comparing
- getting a broad idea
- diving into detail
- discovering unknown things
- keeping up

3.1.1 Finding known items

One of the most common things people use the internet for is to find known items. When you have a known-item task, you:

- know what you want
- have words to describe it
- may have a fairly good idea where to start
- know that there is an answer
- know when you see the answer

Depending on exactly what you are doing with the information, you may be happy with the first answer you find and may not care where the answer comes from. it is also unlikely that the task will evolve while you are finding the answer. Examples of this type of behaviour include:

- finding out what 'apophenia' means
- checking the title of the new Stephen King novel
- getting a copy of the travel form
- checking the price of a product (a single product in a single store – more than that and it becomes a compare task)
- seeing what films Cate Blanchett has been in
- finding out what galangal is.

The best design solutions for this behavior are **search** and **A-Z indexes**. Both can give you an answer very quickly, either by typing your key term into the search box or by scanning a list for it. People will occasionally browse for this type of information, but only if they feel the answer is not far away.

3.1.2 Exploring

Exploring is the complete opposite to finding known items. When exploring, you:

- have some idea of what you need to know
- may or may not know how to articulate it
- may not yet know the best terminology to use
- may not know where to start looking

These 'explorations' do not necessarily end. You may find enough information to get you started, and then discover more later on. In this mode, the information need will almost certainly change as you discover information and learn, and the gap between your current knowledge and your target knowledge narrows.

Other examples of exploratory tasks include:

- learning how people use card sorting in their work practices
- finding examples of sites with complex forms laid out using CSS
- locating music, I like (which for me never ends!).

3.1.3 Refining and narrowing

Refining and narrowing happens whenever you have a large number of items to choose from, and you want to narrow down to just those of interest. This behavior will sometimes be followed by a comparison task, which we discuss below. Examples include:

- You have thought about what is important for your next car, but are not sure which brand and model you want.
- You have ingredients for dinner, but no recipe yet.
- You want to buy a birthday gift for your 5-year-old nephew, and know • that he likes trucks.

  The most appropriate design solutions are **filters** and **faceted browse.** A filter lets you select a number of criteria, and displays results for those criteria. Good filters let you to play around with the criteria and update results as you do so. Poor filters make you set all your criteria up front and submit them to display results (it is poor because you can easily get a zero result, but have no idea which criteria caused the zero result). Faceted browse let you refine a set of results one click/criteria at a time. The best faceted browse systems let you determine which criteria you start with and which sequence you use. You never get a zero result as facets are not displayed where they are not valid.

3.1.4 Comparing

Comparing is all about finding 2 or more things you are interested in, and then looking at the similarities and differences to help you make a decision. You will usually compare after you have narrowed down to a set of things you are interested in. But if there are only a small number of products (for example, three different software versions), you may compare without narrowing.

Examples of when you would want to compare items include many shopping situations, when there are slightly different versions of a product, features for a new school or university – the list is endless. If you are going to design an interface that lets your users compare, you will need a few things to do it well:

- a very good understanding of what criteria and features are important to people
- a very good understanding of how people make final decisions (this may not be the same as their initial criteria)
- content with enough structure to display things side-by-side

- a great filter, to let people narrow (if appropriate for your content).

3.1.5   Getting a broad idea

People get very frustrated when they want just the main ideas, a summary or the big picture, but have to dig around in detailed content first. The solution is simple: make sure you provide summaries of detailed content. Depending on what you are presenting, they could be bullet points, diagrams or even videos that communicate the main ideas easily.

3.1.6   Diving into detail

While some people want just a broad overview, other people want detail – and lots of it. This is another situation where your user research will be particularly helpful. In situations where people need a lot of detail, you will need to know just how much 'a lot' really is. You may not be providing enough information, causing people to go elsewhere. Or you may be still providing far more than people need. A good design solution that balances both these needs is to create layers of information. Start with some good overview information, and let people who need to dive into the next layer for more detail. If it is still not enough, provide another layer with even more detail. The layering stops it overwhelming the people who do not need as much detail.

3.1.7   Discovering unknown things

Have you ever gone to a website for one thing and found yourself spending ages looking at other things on the site? If so, chances are the site does a great job of helping you discover things you did not know existed, but were interested in.This behavior is not one you undertake deliberately. I doubt many people1 go to the web just to 'surf' or look around for things that might be interesting. Or I could be wrong.
Two reasons this will come up when you are designing:
- Your business goals involve encouraging people to stick around – to sell them product they are interested in but did not know about, or maybe to expose them to more advertising.
- You learn through user research that people visit your site with one thing in mind, but actually need something else.

To design well for this behavior, you will need to understand your users. But more importantly, you will need to understand the relationships between your content items, so you can show people 'related' things. And you have to provide links to them – it is all about capturing their attention and making it easy for them to explore.

3.1.8   Keeping up to date

People often want to keep up to date with what is happening within an industry or topic, but are not looking for a specific answer.

3.1.9   Re-finding

This mode is relatively straightforward –looking for things they have already seen. They may remember exactly where it is, remember what site it was on, or have little idea about where it was. Four common ways to implement re-finding are:
- services explicitly for re-finding (e.g. bookmark managers like delicious.com).
- when you are signed in, you can save items (e.g. to a wishlist).
- when you are signed in the site pays attention to what you look at without you needing to save.

- items are saved without you signing in.

    These are all good for different situations. Again, you will use the user research to find out what people most likely need to do, and design features to let them do it.

3.2 How people think about categories

For IA work, this is very important, as a large part of what you will be doing is grouping content into categories. A category is an idea or a concept that represents a collection of things. You see categories everywhere. We even think in categories. We do not think about individual, discrete objects, but rather groups of objects and abstract ideas. And because we think in categories, our language is built around them. Categories are such a key part of IA work that it is good to know how we think about them.

Some key features of categories are:
- They do not exist independently in the world, but in the human brain.
- There is no right answer.
- Category boundaries are fuzzy.
- Categories overlap.
- Items in a category have a family resemblance, but may not have a set of features in common.
- Contents change over time.
- Some things belong better than others.
- Categories such as miscellaneous are real in our brains, but hard to use in IA.
- Categories and sub-categories form a hierarchy.

In the following section we will describe some of the key features about how categories work in our brain, how we think about them and why they are important to us. For an example.

3.2.1   A category: Sports

I sent out a tweet asking followers to send me the names of 5 sports (that's all – it wasn't a trick question). This is what came back:

Figure: 3.1 How people think about categories

This simple example illustrates some important characteristics of categories, which I have outlined below.

3.2.2 All about categories

The most important thing to know about categories is they do not exist independently in the world. They exist in the human brain. They are formed over time, based on our experiences with the world. And because we all think differently, we all have different ideas about categories. There are consistent patterns. And individual communities, cultures and workplaces will even use categories that are similar. But no categories (or at least very few) will ever be universally understood.

3.2.3 There is no 'right' answer

One of the things people ask about categories is how to figure out what set of categories are 'right' for their content. This holy grail of categorisation does not exist. There is no right way to categorise a particular set of information. In most situations there is more than one way to categorise a given set of information, and the 'right' answer will depend on things such as:
- what people already know about the information
- what they will be using information for
- how they think

3.2.4 Category boundaries are fuzzy

Category boundaries are fuzzy. They are not clear, well-defined and universally understood. They are messy, and the edges blur and overlap with other categories.

3.2.5 Categories overlap

The sports example illustrates another aspect of categories – their boundaries overlap. If you asked people to give you the names of five sports, there would be some that end up in both categories, and quite validly too. When you create a set of categories and assign your content to it, some content will definitely fit in more than one place (though if it happens a lot, it may be a sign you need to think more about your approach).

3.2.6 Family resemblance

A category can be filled with items that do not share a single set of attributes (in the category literature this is called 'family resemblance'). For example, if you look at the sports diagram, there is no characteristic that fits them all. Soccer, cricket and basketball are all team sports and competitive; rock climbing and yoga are individual sports and non-competitive

3.2.7 Contents change over time

Category boundaries are not fixed – they can change over time. For example, as new types of sports emerge they will become part of the 'sports' category.

3.2.8 Dependent on context

I asked the sport question just before Christmas in the middle of the afternoon Australian time, late evening US time and before most of Europe woke up. Can you imagine how different this would be if I asked it in the middle of the Olympic Games? It does not change what a sport is, but certainly changes what people are thinking about.

3.2.9 Some things belong better than others

Another attribute is that some objects fit in a category better than others – that is, there are central and non-central members. For example, cricket, soccer and baseball were mentioned more than anything else – certainly more than yoga and beer pong. These things are a better fit for the 'sports' category. You will find a lot of these when you create categories for your web content.

3.2.10 Some categories are hard to define, but still real in our brains

Most sets of content will have a set of items that are miscellaneous, other, general. This is a real category in our brains. We think of all the things that fit into various categories, and will usually have things left over. We should expect this to happen. Again, because categorization occurs in our brains, boundaries change over time, and some things fit better than others. We should expect a pile of things that do not fit. Our problem is not usually the category of miscellaneous stuff, but what to do with it in IA work where our job is to help people find information. Usually, put these types of things in a category where they best fit (even if that fit is poor) or create a single-item category (which is fine).

3.2.11 More than one level – subcategories

Categories contain sub-categories and sub-categories contain sub-categories and categories can be grouped into broader categories until they make a whole hierarchy of categories. We will talk about hierarchies and their different types briefly below:

3.2.12 Basic level categories

If I asked what you were sitting on right now, I expect you would more likely say chair than furniture or office chair. If you were researching how to make your house more energy efficient you may tell me, you were interested in finding out about saving water rather than sustainability or under-floor rainwater tanks. These examples represent an important concept in language and category theory – where we think and talk. I mentioned above that all categories can be broken down into subcategories and aggregated into broader categories.

Even though this does happen, we tend to think and talk at a particular place in the category hierarchy. In categorization literature this is known as the **basic level category**.
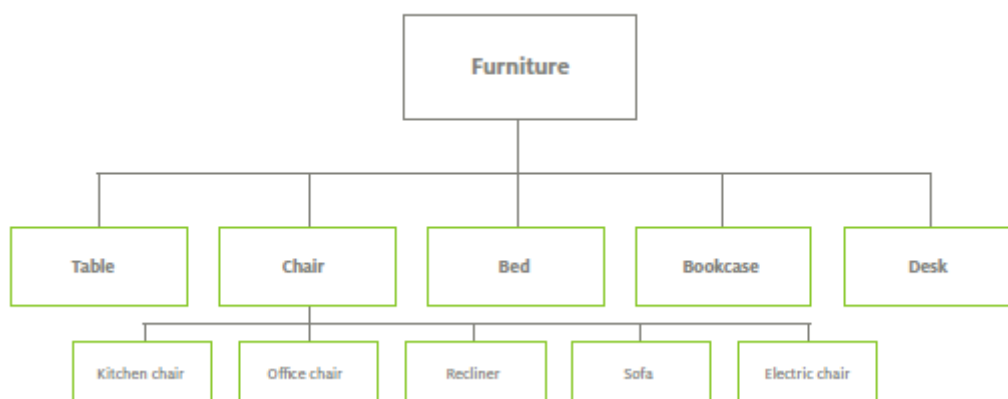
Figure 3.2 A simple hierarchy for furniture

There is a lot to this, and lots of interesting research if you are into categories as much as I am. But given you are probably not, here are the two main implications of it.

3.2.13 We think about 'topics'
When we are researching and looking for information, we mainly think about the topic we are interested in. For example, I might be researching how to save water, reduce waste or reduce my energy use. These are all topics. I do not think "I'm looking for information" or "I'm shopping" or "I'm a water-wise gardener". I think "I want to know more about rainwater tanks".

This has important consequences for the type of classification scheme you choose for your content. it is almost always better to arrange content around topics than around tasks or audiences, given this is where people think.

3.2.14 People think at different levels depending on their experience
One important thing, which relates to the idea of basic-level categories, is that people think at different levels of a hierarchy depending on their experience and knowledge about the topic. You can imagine talking to the salesman when looking for a new bed – you will be talking about a 'bed' (the category you use) but he'll know and think about the different types of bed.

This happens a lot when we talk to subject matter experts. They think at a more precise, more detailed level. Sometimes the people who will use their information will be thinking at a much broader level. Your IA job is to bridge the gap between the two – not always an easy task.

3.3 Objectives
The study of this unit will enable you to know:
- How people look for information
- How people think about different categories of information
- About the basic level categories

3.4 Self-Assessment Questions
Q.1 How people look for information in the electronic environment? Explain with suitable examples.
Q.2 Explain some common information seeking behaviors with examples.
Q.3 What is category? How people think about different categories of information? Discuss with examples.
Q.4 Differentiate between the 'Search' and 'A-Z Indexes' options with relevant examples.

3.5 Activities
As a brainstorm, write down five different 'Information Resources' and create basic categories, sub-categories and then sub-categories for them with suitable examples.

UNIT NO. 4
UNDERSTANDING CONTENT

4.1 Content you have
When redesigning websites and intranets, updating applications, or adding new types of content (such as video and user-generated content) to an existing site. One of the first steps on the content side of the project is to understand what you have already. If you are working on a new project with no content, jump to the next chapter, which is all about figuring out what you may need. For any content-heavy project, you need to have a good understanding of the content before you even think of tackling the IA. If you do not, your IA and content just will not fit together later. The content includes everything you make available to people, e.g. words, video, audio, downloads, files, feeds and functions.

4.1.2 Learning what you have
Learning what content, will help you to:
- Understand the subject: If you are working on a new site, or a subject you do not have much experience with, this step will help you to learn about the subject – essential for creating an effective IA.
- Look at it with fresh eyes: If you are working with something you already know, it is a great refresher and gives you another chance to look at your content.
- Clean up: You will get a chance to clean up old, out-of-date and inaccurate content.
- Migrate it: If you are migrating to a new IA or a new content management system (CMS) you will need to know what you have so you do not lose anything in the migration.
- Manage progress: As you work through a project, you will need to keep track of things like what content has been rewritten, what needs deleting, and what has been migrated.
  How you go about learning what you have will depend on how much content you have. As you can imagine, the process for a 100-page informational site is different to a product catalogue with hundreds of thousands of items.

The three common approaches are:
- Full content inventory
- Partial content inventory
- Content audit

4.1.2.1 Full inventory
A full content inventory lists out everything on your site. It is the most useful approach because you get a complete listing of everything, which means you will completely understand the content when creating the IA. A full inventory may include a list of:
- all 'pages'
- all downloadable objects, such as PDF files, documents, • spreadsheets, executables or other files
- all embedded objects, such as video or audio
- other content, such as reader comments

4.1.2.2 Partial inventory
     This usually collects information for a particular number of levels of the site, though it may show some parts of the site in more detail. It is a good practical approach for very large sites as you still get a good understanding of the overall content in a reasonable time.

4.1.2.3 Content audit
     A content audit collects less information than either of the inventory approaches, and is more a sample across the site. It may collect details for the first couple of levels of a site, then details for different page types in each section. A content audit is most useful for product sites. You may not need to list out every item sold on the website, but you still need information on a good cross-section. As with the partial inventory, you may want to create a more detailed inventory for some parts of the site.

4.1.3   What to collect
     What information you collect for each page (or content item) will vary depending on the type of project and the type of content you have. The idea is to collect only what you will need for your project, and nothing more. Here is some of the information we usually collect:
- Link name: The label used in navigation
- Page name: The main heading on a page. This may be different to the navigation link name and is handy to see if the navigation and page names are different
- Page URL: The full URL of the page
- Content type: e.g. is it a publication, FAQ, how-to, product, brochure, report, specification sheet, article or something else?
- Resources: Are there PDF or Word documents, images or other downloadable files attached?
- Status: Is it current or out of date?
- Date updated: When was it last updated?
- Owner: Who owns it? (For sites with distributed authors)
- Comments: Anything else you want to note

4.1.4   Where the 'content' comes from
In most cases, you will use the current site. But sometimes you will want to scout further:
- If you are working on an intranet, you may want to find out where else people get information (e.g. network drives or document management systems). You may want to also look at how people store information, such as use of email folders and local drives.
- If you are combining multiple websites, make sure you list content from all of them.
- Find out if you have any customer extranets to see if they contain • content relevant to a broader audience.

4.1.5   Taking an inventory
Always use spreadsheets to record content inventories. Because they are so flexible – you can vary what you collect for each project, add new information as you need to, and easily share them with other people.

4.1.5.1 Semi-automatic

If your client has something similar to a content management system, you ask them for a listing of everything in the system. If you really lucky this will:

- Have details about every page and object (not just titles, but links, date updated, owners etc.)
- Show the basic structure of the site (if it is a hierarchy)
- Only show content available publicly.

4.1.5.2 Manual

Sometimes, though thankfully it is becoming less common, there is no way to create an automatic listing. In this case you have to create the inventory manually by clicking through every page and listing it in the spreadsheet. Here is how to create a manual inventory for a hierarchical website:

- Start at the home page. In the spreadsheet, list out the main navigation items, plus anything not included beneath one of the main navigation items (e.g. contacts, site map, A-Z index, disclaimer, copyright and privacy pages).
- Go into the first navigation item and list out the direct sub-pages for that item.
- Start at the first sub-page and list out any sub-pages of it.
- Continue going down the first path as far as the structure goes.
- Go back one level and continue.
- Keep going down branches and listing out everything beneath before going up a level. This will help you keep track of where you are up to so you will know you have covered everything.
- At each step just list the basics – link name, page name, hyperlink and maybe whether there are downloadable files. Do not worry about anything else yet.

4.1.6   Content inventory tips

One of the most important aspects of an inventory is the relationship between items. If your site is a hierarchy, make sure the hierarchy is reflected in the sheet – look at the numbering system and indenting them. This makes it much easier to understand what you have. One question people ask all the time is where to include cross-links in the inventory – beneath the page they link from, or within the section where they live structurally? include only the structural aspects or the inventory gets messy. Try as hard as possible to list each page (or resource) only once. If you think it is worth knowing what pages' cross-link to each other, create a separate column for it, or make a note in the comments column. List out all pages, but not always all resources on the pages (e.g. the video, audio or downloadable files). If you are keeping pages as they are, you may not need to list out all the resources. But if you will be using a more automated system to produce your pages in the future you may want to list all the resources.

Other tips:

- Use two monitors, with the site on one and the spreadsheet on the other. It will save you countless mouse-clicks swapping between the two
- Have a keyboard with browser back and forward buttons beneath the space bar. This too saves a lot of mouse clicks. (If you do not have one of these you can use the backspace key in most browsers instead of the back button).
- Use standard keyboard shortcuts for copy and paste.
- Stop regularly and stretch. This is one of those tasks that keeps you at the keyboard 'just finishing one more section' for far too long.

4.2 Content you need
The next step in content planning is to think of what you may need in the site. For a redesign, you can use the current content and how it is used as a starter. The content you choose should not only meet the needs of the people using your site, but also achieve your project goals. Sometimes the choice of content is easy and obvious, especially for small sites. For larger sites, it is not hard to come up with content ideas, but it can be a nightmare to figure out what to keep.
Three places to start getting content ideas are:
- current behaviors
- user research
- your own ideas for content (or your client's)

4.2.1   Current behavior
    One of the easiest ways to get ideas for content, or to confirm what you should include, is to look at what is being used already. If you have web statistics for current content, use them to identify the most popular content. Do not just check the most recent statistics – some content may be more popular at different times of the year. In most cases you will keep your popular content, though you may want to make it easier to find. Think about why people like this particular content, and whether you can create more like it. Also think whether you can use it to help people find other things. For example, you may be able to provide better links to related content. Even if you are working on a brand new site, you can still get some ideas about what people are interested in. You can visit websites like digg.com or delicious.com and see what is popular in your field. If you have competitors, or sites that are similar to yours, see if they display 'top articles'.

4.2.2   User research
User research is a great source of information about the types of content you can provide.
Go through the research (you may have already done it in the analysis step) and identify everything that indicates a content need.
Some information needs will be obvious:
- "I go to this site to download the latest research report"
- "The page I use most is the canteen menu"
- "I use this A-Z of yoga poses a lot to see how to do a pose or to refine how I'm doing it"
  When you are going through the user research, also pay attention to needs for functional items such as calculators, templates and tools.

4.2.3   Content brainstorm
The easiest way to generate a list of content ideas for a new site is to brainstorm content ideas. You should do this for an existing site as well – you will probably come up with ideas for new features. Simply brainstorm with your team. Start by thinking about the types of content you could include. Use your user research and business goals to guide you.

4.2.4   Competitor analysis
When you start thinking about content, it is a good time for competitor analysis – seeing what your main competitors provide and how well they do it. You obviously will not want to copy them, but this process may trigger some ideas that did not occur to you. Again, check they meet

both the needs of your audience and your project goals before including them on your list of potential content.

4.3 Communicating about content

This chapter describes different types of documents you can use to communicate with authors and your team about content, and offers tips on working with content authors. When you talk about content, you inevitably talk about the IA as well, as the two are so intertwined. In this chapter, I will just discuss what you may need to communicate about content before the IA design starts.

For content authors, you may need to:

- show them what content exists
- discuss what should be deleted and rewritten
- talk about priorities for updating or adding content
- discuss content responsibilities
- In the project team you may need to:
- keep a record of content ideas
- manage project activities such as content updating and migration

4.3.1   Content inventory

Content inventory is also very useful when you are talking with content authors and your team. It may not be pretty, but it is functional, flexible and easy to work with. Sometimes combine the content inventory with website analytics data to visually show how people use it. As given in the following figure, colour-code rows of content according to how much people use it. it is a powerful way to help people see the content being used most often (and the content not being used). Depending on what you want to communicate to your authors, you can also create summary charts and diagrams.

	A	B	C	D
1		Navigation title	Page title	Comments
2	0.0	Home	no page title	
3	1.0	UX Australia 2009	no page title	Page title is long description
4	1.1.0	About	About UX Australia 2009	
5	1.1.1	Promote	Help promote UX Australia 2009	
6	1.2.0	Program	UX Australia 2009 Program	
7	1.2.1	Main conference	UX Australia 2009 presentations: A-Z	
8	1.2.2	Conference audio	UX Australia 2009 conference audio	
9	1.2.3	Pre-conference workshops	UX Australia 2009 pre-conference workshops	
10	1.2.4	Social	Social program	
11	1.2.5	Call for proposals	Call for proposals	
12	1.2.6	Guiding principles	UX Australia 2009 program – Guiding principles	
13	1.3	Reviews	Reviews and posts for UX Australia 2009	
14	1.4.0	Speakers	UX Australia presenters	
16	1.5	Why attend	Why attend UX Australia	
17	1.6	Pricing	UX Australia 2009 pricing	
18	1.7.0	Sponsors	Sponsors	
21	1.8.0	Venue	Conference venue	
25	1.9	Crowdvine	UX Australia	Link to crowdvine domain
26	2.0	UX Australia 2010	no page title	Page title is long description

*Figure: 4.1*Colour-coding according to popularity helps you spot patterns in content use

4.3.2 Site map

If your website is small, or you want to communicate about the top few levels of a large site, you can draw the content inventory as a sitemap (a diagram of the content. Unfortunately, it does not scale well to large amounts of content.
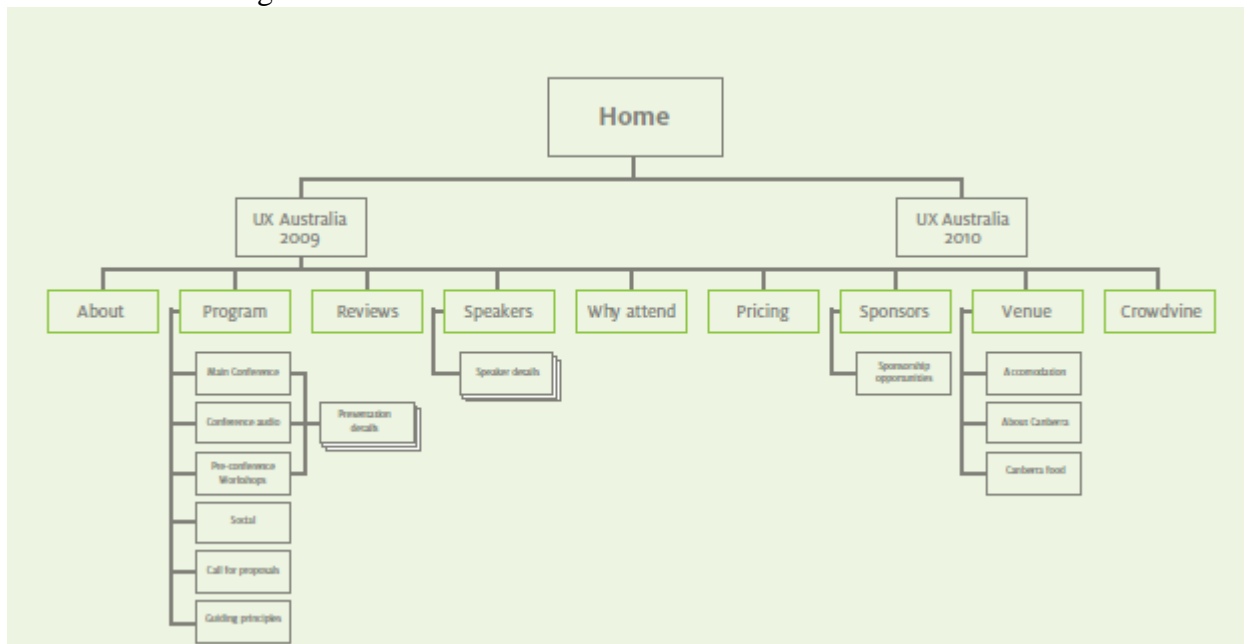

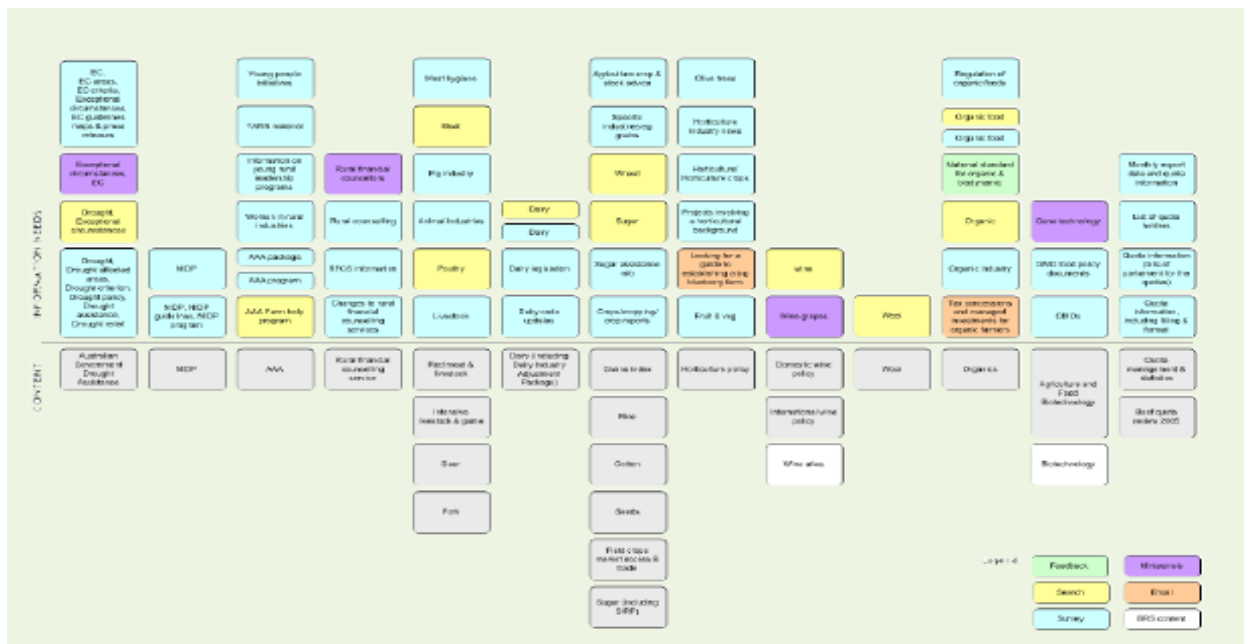*Figure 4.2* A sitemap is good for showing details of small sites

Figure 4.3 Diagram showing user needs and content

4.3.3 Information needs diagrams

The above diagrams can benefit from showing content ideas against the user needs. It helps people see how the content will be used, and whether there are gaps or content without a defined need. When you are talking to people about content, particularly authors, make sure they have access to any information about users. It will help them keep the users in mind as they prepare the content.

4.3.4 Liaising with content authors

One question that comes up repeatedly is how to 'get content from authors'. It usually comes from people designing and building a website who are 'waiting for the content to arrive' before they can continue. Content is the most important part of most websites. It's what people come for – whether it is text, video or audio. People rarely visit a website to see what it looks like. So the people responsible for the content should be involved **right through the process.**

Content shouldn't be treated as an afterthought, or something to be "poured" into the website. **Content** is **the website.** Imagine how much better, and how much more targeted, the content would be if the authors were involved in the user research from the start. And think how much better the IA would be if you involved the people who know the content best.

4. 4 Objectives

The study of this unit will enable you to know:

- About the different types of contents.
- Project progress
- Content inventory and relationship with main content
- Content you need while designing website
- Current practices/behavior with respect to content

4.5 Self-Assessment Questions

Q.1 Define contents and its major types with relevant examples.
Q.2 How to maintain webpage design project progress? Discuss.
Q.3 What is content inventory? Also explain how to manage content inventory?
Q.4 Content you need while designing website.
Q.5 Discuss current practices/behavior with respect to content design.
Q.6 Design a website project for University library having these information: '*Link name; Page name; Page URL; Content type; Resources; Status; Date updated; Owner; Comments* with relevant examples.

4.6 Activities

Imagine you are assigned to design a website project for University library having these information: *Link name; Page name; Page URL; Content type; Resources; Status; Date updated; Owner; Comments*. Now. Give a detailed overview of these information with relevant example.

UNIT-5
CONTENT PLANNING AND CLASSIFICATION SCHEMES

5.1 Content planning and priorities

The last steps in content planning are to define the content in more detail and set priorities for release. When defining the content in more detail, consider:

- content format
- length
- audiences
- tasks
- how accurate it is now
- what changes will happen over time
- whether it is structured or unstructured (and whether you will use any structural • aspects in your design)

You may release your whole site at once, or in stages. If you release in stages, you will need to set priorities. You can use a scoring system, determine value versus cost or release core content first. If your site is on a cycle, identify what content is released at each part of the cycle. With a good understanding of the current content, and solid ideas for future content, it is time to take the next step. You need to define the content in more detail, think about what you need to provide, and prioritise and plan for its release.

5.1.1   Defining detailed content

Defining the content in more detail is not hard. But it is important. Make sure you have thought about what the content actually is and how it can be used. (You will finish thinking about how it can be used as you design the IA.) Do this for current content as well – it will help you identify opportunities you may not have thought about yet. When you brainstorm content ideas you will usually come up with high-level content types. Before drafting an IA, you will need to know exactly what the content will be. For example, in brainstorming for a conference, we might say we need:

- a description for each presentation
- a bio for each presenter
- a map of the venue
- a list of nearby accommodation
- information for people coming from out of town

Now, consider the following aspects.

5.1.1.1   Content format

For each type of content, think about the format it will be in. For written material you could produce a publication, how-to, brochure, report, specification sheet, article, FAQ or just a plain old content page (or something else – this is not an exhaustive list). Maybe you would be better off with a downloadable file, an audio clip, video or a diagram. It may even be appropriate to offer multiple formats – you may want a video, written instructions and a quick reference for mobile use.

5.1.1.2   Content length

Make sure you know how long your content will actually be. If you are working with existing content, check the longest and shortest pieces of a particular type. Look at which content you might combine and see how long it is likely to be. If you are working with brand new content, draft a couple of core content pages to get an idea of the length. And then design for the content – do not squeeze or pad the content to the design.

5.1.1.3   Audiences

Check to see if there is any content aimed at particular audiences. If there is, go through everything you have and identify who it is for. When you go to design the IA this will help you decide whether an audience scheme is suitable, and what audiences and content you will use. And do not forget your user research. It will come in very handy here, particularly if you have two or more audiences with different understanding of the subject and different needs. You may decide to write content specifically for each audience, or to provide overview material for one and detail for another.

5.1.1.4   Tasks

If your users have defined tasks to do (such as booking travel or reconciling their bank statement) see what content is available for each task. This will quickly show content gaps, and is a very important process if you are writing technical support material. It may also reveal some high-priority tasks that need prominence in the IA, or even guide you towards using a task-based classification scheme (which we will discuss in the next chapter).

5.1.1.5   Accuracy

If you are migrating content from an old IA, spend some time assessing how accurate the current content is, and what you need to do about it. In most of IA projects, it is noted that a lot of the content has become out-of-date. If you are facing the same problem, you may need to get it up-to-date before you can finish analyzing it. Otherwise, you may well be making decisions based on the old content, not the new.

5.1.1.6   Changes over time

Find out how often new content will be added, and what type of content it will be. This will have a significant impact on the IA you develop, as you do not want the content to outgrow the website.

5.1.7   Structured or unstructured content

One of the most important things to figure out for each type of content is whether it is structured or unstructured (and whether you will use the structure in the IA). With **structured content** every item of a particular type is made up of the same pieces. You can look at one item and know that all the others of the same type will be similar. If you have ever worked with a database, you will know what this mean – everything in a database is structured content. All content of a particular type has to fit into the same structure. Structured content takes more work. You need to define its pieces, and then decide how you are going to use it. And every item has to fit into the structure. So only create structured content when you will be using the structure to automatically generate content, or to generate different views of it.

Unstructured content is where every item in the website is different (structurally). As one of reviewers for this book said "unstructured content is stuff that only occurs once in a website." You need to know this because it will be a significant input to how you design your information architecture.

5.1.8   Setting content priorities
Depending on the size of the project you are working on, and whether there is any time-specific or seasonal content, you may need to decide when to release certain content. In the olden days of the web, most of the projects were large website designs or redesigns that would be launched when they were complete. These days, most of the projects are released in stages.

The main advantage of releasing in stages is you can release content earlier. Projects that wait until everything is 'finished' get held up by the slowest content. Releasing in stages also acknowledges the web is not a publication. Your site will always be changing, so there is no need to wait for everything to be finished.

5.1.9   Cyclical or seasonal content
Cyclical or seasonal content runs on a yearly cycle, with different information being released at different times. It showing key conference milestones, what content would be released and what sections it would be in:

5.1.10 Value vs cost
It plotted the main content chunks on a matrix, with one axis showing the value to the user and organisation, and the other showing the cost or difficultly of producing the content. This helped identify priorities – low value, high cost items would not be released until later.

5.1.11 Scoring system
For one big website redesign, with multiple teams and sections of content, create a scoring system that include:
• how important the content to users (1=not important, 10= critical)
• how much of it out of date (1=out of date, 10=accurate)
• how much content there (1=lots, 10=little)
• how quickly the authors could get it update (1=likely to be slow, 0=fast and responsive)

5.1.12 Core content first
On an IA project we know some content are core to the whole site, and a lot of the other content would link into it. Rewrite that content first so authors could link to it as they update the rest of the content.

5. 1.13 Working with authors to priorities web content
Engaging stakeholders will be key to managing expectations, building relationships and allowing all concerned to voice their opinions. Running a workshop, or even organizing a well planned meeting, can put all of the content requirements on the table (or the wall using sticky notes if a practical session). Here is a suggested agenda:
• Invite the project's content team (that get a say in what to priorities)
• Print off and stick up your sitemap / list of potential content pages and assets
• Does this content directly support the communication goals for the target audience?

- Is this content unique to this site? (There is little value in generic content)
- Does it need lots of effort to produce? Will it be difficult to maintain?

By the end of this session, all those involved will have had chance to share their priorities and put the case forward for why some content should take priority over other content. This should all be discussed with the business goals, user needs and target audience in mind. it is also worth emphasizing that quality trumps quantity when it comes to content.

5.2 Classification schemes

One of the challenges for an IA project is figuring out what works best for your audience, your content and your project's goals. Any set of content can be organized in more than one way. One of the most important decisions is choosing how you will organize content so it is useful for your audience, which is known as 'classification schemes'.

There are two common types of classification schemes.

The first is called an **exact scheme**. With an exact scheme you will not have any problem assigning items to individual categories, and the categories themselves may be easy to create e.g. time, alphabetical and geographical schemes. The second is called an **ambiguous scheme**. With an ambiguous scheme you may well have to design it from scratch specifically for your situation. (While there are pre-existing categorization schemes for many situations, for your website or intranet you will probably make up your own). Examples of ambiguous schemes include subject, audience and task.

5.2.1 Types of classification schemes

You can use a range of classification schemes, including:

- Time
- Alphabetic
- Geography
- Format
- Organisational structure
- Task
- Audience
- Subject or topic

Of course, you can use more than one of these, and even mix them up.

5.2.2   Time

Time-based schemes organise content into groups according to when something happens. You can use them for any content where time is a key aspect of the content.

This scheme is most useful when you know people want to access content based on the time or date. For example:

- News
- Weblogs
- History
- TV guides
- Event listings

5.2.3 Alphabetic

As you can probably guess, an alphabetic scheme is also an exact scheme – one where you do not have to make up any categories and can assign content to categories easily. Alphabetic schemes can be used for practically any type of information – as long as you can give an item a name, you can include it in an A-Z scheme. But that does not mean alphabetic schemes are necessarily good for all content. Alphabetic schemes work best when people know what they are looking for, know how to describe it, and the item labelling matches the words that they are looking for. An alphabetic scheme is perfect for this type of task as people can simply scan a list of words and spot the one they are looking for.

5.2.4 Geography

Geography is also an exact scheme – once you have a set of boundaries, it is easy to tell which category or area a particular things belong to. This is almost obvious, but geographical schemes can be used for any content with some sort of geography as a key attribute. And just like time and alphabetical schemes, the real trick to using it is knowing whether your users want to access information geographically.

5.2.5 Format

Format is another exact organization scheme, where you organize your content around the format of the file. This is particularly common on sites such as instructional websites (where they group videos, articles and tutorials) and article websites (where they group articles, interviews and tools). Format is a great way to show people the different types of information available once they have found the topic.

5.2.6 Organizational structure

Another exact scheme, and one you will come across in both intranet and website work, is the structure of the organization you are working with. This scheme comes about because it is easy for authors – they can prepare information and put it in 'their' part of the site. And managers can see not only where their stuff is, but also the stuff for their section/organization.

5.2.7 Task

Task is the first ambiguous classification scheme we will discuss. Because it is an ambiguous scheme you will have to come up with the categories first, and then assign content to them. Task-based schemes are interesting. On the surface they seem to be fairly easy – just organize the content around the main tasks that people do.
It is found that task-based schemes work best when:
There are only a small set of tasks•
- The main tasks have quite clear boundaries
- Your content is easy to allocate to the task groups
- Task-based classification schemes tend to be more suited to things like web applications more than websites and intranets. However, even something like accounting software (which is quite a task-based activity) does not fit into tasks, but instead to the content types you will work on.
- When you are looking for tasks in your user research, keep an eye out for phrases like "I need to" or "I do." Whatever follows is usually a task.

5.2.8   Audience

Audience schemes are very much like task-based schemes, in that they often sound like a good approach on the surface but are harder than they look.

Audience schemes are suitable, and only work when:

- You can split your audience into groups, with very clear boundaries
- At any point in time, a user can identify which group they belong to (they may switch groups for different tasks – this is okay as long as they know where they fit each time)
- Your content assigns across audience groups without too much overlap

If you do decide to use an audience scheme, take care with your labelling. One of the most common mistakes is not being clear about whether a group is about something or for a group of people. For example, are the groups Students, Parents & Teachers a list of people, or information for these groups. It is usually fairly clear if the whole classification scheme is audience-based, but harder to determine when the scheme is mixed.

5.2.9   Subject/topic

The type of classification scheme you will use most often is a subject scheme (or topic scheme – use the terms interchangeably). And chances are you will be coming up with it from scratch. A subject scheme groups similar things together based on what they are about.

5.2.10 Combination schemes

These classification schemes can be used independently or to combine more than one schemes. There are no hard and fast rules. For example, you could use:

- Mix up types at each level
- Start with one type and use a different type at the next level
- Use more than one approach for your whole content set

5.2.11 Choosing a classification scheme

Often, the choice of a classification scheme, or schemes, is straightforward. As we have seen, some schemes naturally suit particular types of information or user tasks.

5. 3   Objectives

The study of this unit will enable you to know:

- Website content planning
- Website content formats
- Website content structures
- Website classification schemes

5.4 Self-assessment questions

Q.1   Define website content and its various formats with examples.
Q.2   What do you mean by 'content planning'? Discuss with suitable examples.
Q.3   Write a comprehensive note on various content classification schemes.

5.5 Activities

Read this unit carefully and prepare contents for a *'University Library Website '*and organize its Information Resources and Services according to the following classification schemes.

- Time

- Alphabetic
- Geography
- Format
- Organizational structure
- Task
- Audience
- Subject or topic

UNIT-6
DESIGNING AN INFORMATION ARCHITECTURE

This section describes IA structures and common patterns, the importance of language and labelling, the process of actually creating an IA, testing it and communicating it.

6.1   Information Architecture patterns (What patterns are?)
This section is all about IA patterns – common approaches to IA for different types of sites. You can use these patterns as a starting point when figuring out your own IA. Chances are your site will fit into one of the patterns, or maybe a combination of them.

A pattern is a common solution to a design problem that crops up again and again. Patterns are common in software development (another place where the same issues crop up again and again) and provide developers with solutions to software design. They are also fairly common in interaction design, providing designers with re-usable solutions to common needs such as login forms and pagination. One of the key ideas of patterns is that they emerge from real-world use. You do not sit down and try creating a set of patterns for a brand new field. The patterns we discuss below are generated from the wild – from seeing how people come up with common approaches to common problems.

6.1.1   IA patterns
These patterns are also relevant for intranets, but may not apply as easily to things like web applications and mobile applications – consistent patterns will emerge for these areas over time. Below describe the key features of each pattern, when they are good to use, and provide some examples of sites that use them. There are four simple patterns (hierarchy, database, hypertext and linear) then combinations of the three.

6.1.2   Simple patterns (Hierarchy)
We have all come across hierarchies, and indeed we have talked about them already in this book when we talked about groups and subgroups. In a hierarchy, the relationship between items is one of parent and child; broader and narrower. It is about aggregating upwards into broader groupings or splitting downwards in narrower groupings.

   Hierarchies can have described as broad or deep:
- A broad hierarchy has a lot of items at the top level, but few levels.
- A deep hierarchy has a few items at the top level, but many levels.
   A hierarchy can also be described as strict or polyhierarchy:
- In a strict hierarchy an item can be in one and only one place.
- In a polyhierarchy an item can be in more than one place.

   Strict hierarchies are necessary in the physical world – after all, it is impossible to put an individual item in more than one place at a time. However, in the electronic world it is easy for us to put things in more than one place. It also copes better with the messiness of real-life categories, letting us place things that people expect to find in more than one place and allowing category boundaries to overlap. Because hierarchies are a simple and familiar way to organize information, they are suitable for a wide range of content. They are particularly good for small websites that need nothing fancier than a couple of levels of hierarchy – a top level (home page), some second level pages and maybe a few more detailed pages beneath them. They are particularly suitable for content-heavy websites where the content is quite varied. They are also

good when your information contains different levels of complexity. For example, you can present overview or broad information first, and allow people to drill down into more detail as they need it.

6.1.3 Everything in 3 clicks?

For many years a web myth stated that everything should be fewer than three clicks from the home page. For many sites, this is just impractical. To fit everything into a hierarchy like that, there would be so many items at each level it would be impossible to select. Instead, it is far more important that people can make easy choices at each level, and know they are on the correct or comfortable path. People really will keep clicking if they feel like they are on the right track and learning as they go.

6.1.4 Database

You have probably come across databases–computerized storage for all types of information. Here I'm talking about a database not as a technical object, but rather as a conceptual pattern. The common aspect of databases (technical ones) is that there is a planned structure (or model) and all information has to fit into that structure. You cannot shoe-horn something into a database that does not fit the model.

The database pattern is similar – it is for content that has a consistent structure. The individual pieces of content may have no relationship to one another – they certainly do not have the parent-child relationship that hierarchical content does – but they have the same structure, and are made up of the same pieces.

For example, on a website, these two items do not really have anything in common:

But they have the same pieces that make up the listing:

- title
- description
- tags
- materials
- location
- payment methods
- date added
- photograph
- category
- colour

One of the big advantages of database structures is that you can store the data once then use the pieces of the structure (the metadata) to display information in different ways. Database structures are good for music, product catalogues, books, articles, weblog posts and much more – really, anything where the content pieces have a consistent structure. They are great for situations where people may want to access the content in more than one way.

6.1.5 Metadata

Metadata is often defined as 'data about data' (or 'information about information'). It may not be a very helpful definition, but it is an accurate one. Metadata is all of the information that describes or relates to a piece of content. There are three different types of metadata:

- Intrinsic: What the object actually is?
- Administrative: How it is used?

- Descriptive: Description of the item?

For a weblog, metadata items may include:
- Type: blog post (intrinsic)
- Author (administrative
- Date posted (administrative)
- URL (administrative)
- Status: published (administrative)
- Title (descriptive
- Category (descriptive)
- Tags (descriptive)

This metadata can be used to for two main things:
- Generate lists of particular content (e.g. show all content in the 'Announcements' category)
- Choose what to show on a page (e.g. include title, author, description and category).

6.1.6 Hypertext

The hypertext pattern is an interesting one for information architecture as it is almost a pattern of an anti-structure. In this pattern, content pieces are connected to one another simply according to relationships between them. There is no master structure like either a hierarchy or a database – content is just joined together via links. The best example of a hypertext structure is a Wikipedia. Wikis do not have a pre-planned structure – content is joined by links embedded in the text.it is a perfect embodiment of the hypertext structure. There is no master hierarchy for Wikipedia content, nor is there a strong database structure. (Yes, it is stored in a database, and has some very basic pieces like heading and descriptions. But it is not a database structure like the ones shown above.) Each page is independent, connected to other pages by associative links.

Hypertext structures are particularly useful when the content is being developed over a period of time and you do not know exactly what you are going to create. The main issue with hypertext structures is their success depends entirely on people making connections between content pieces, and linking them together. Unlike hierarchies where you can see the next level down, or databases where you can display all content of a particular type, hypertext structures do not have the ability to show related content automatically. If authors do not know what is around and do not create links, there is no way for people to find the information.

6.1.7 Linear

A linear pattern is just as it sounds – one thing follows another in a straight line.

Linear patterns are not particularly common on the web – we mostly use patterns that let people jump to content in a way that makes sense for them. However, you can use a linear pattern if you have a situation where people must understand one thing before they move onto another – usually for instructional material.

6.1.8 Combined patterns

Now let's look at how these three simple patterns can be combined to create more complex information architectures. There is some overlap between these, so do not worry if your site does not fall exactly into one or another. One very common pattern (probably the most common pattern on the web) is a combination of a simple hierarchy with some database content.

This pattern is suitable for all sorts of small, medium and large sites. It lets you create hierarchical sections of the website for basic content, and then to use the power of a database to

assemble detailed information within a section. The hierarchy and database pieces may be integrated (e.g. a database structure within one of the sections of the site), side by side (e.g. a database structure as a whole section of the site) or any combination in between. One of the main challenges with this type of pattern is deciding what pieces you will turn into structured content and what you will leave as hierarchical.

6.1.9   Catalog

If the hierarchy +database is the most common pattern on the web, the second most common would definitely be a catalog pattern. This structure is really just a database pattern, but is worth mentioning because it is so common, particularly in e-commerce. At the bottom level is the content. Above that are up to three levels of hierarchy, depending on the size of the site and type of content. There are three different types of pages between the home page and the content page:

- Gallery pages: these provide direct access to the content pages.
- Department pages: provide access to the galleries.
- Store pages: provide access to the department pages.

6.1.10 Hub & spoke

The hub & spoke pattern is really just a hierarchy. However, it is worth noting as a separate pattern as the way people use it is different to a hierarchy. With a hierarchy, people tend to start at a point in it (often the top level) and move down into deeper and deeper content, often sticking within the one branch of the hierarchy. With a hub and spoke, people move down one level into something more detailed, return to the starting point (the hub) then may move to another detailed page, back to the hub and so on.

6.1.11 Subsites

With this pattern the overall site is a series of subsites, held together by a home page or top-level pages. The subsites can use any pattern, and do not all need to use the same one. In some situations, the subsites all use a consistent approach to navigation and page layout, which reinforces the idea that the subsites are part of a larger brand. In other situations, the subsites have quite different approaches to navigation and page layout as is appropriate for the content and audience, but still use some approach to show they are part of a whole.

This pattern is particularly useful for large organisations that have a range of responsibilities or a range of brands, but still need to represent themselves as a whole. As you can imagine, universities are a perfect example – the university as a whole represents an organisation and brand, the content is diverse, and the individual parts of the university have different communication needs (and people, politics and ego).

6.1.12 Focused entry points

In a lot of situations (again, mainly for large sites) you will learn it will not be possible to 'organize' the content in a single way that will suit all the users – usually because they have different information needs and different levels of experience with the topic. In this situation, you have used a 'focused entry points' pattern. When you use this pattern, you set up the site using whichever pattern best suits the content and the people who need it (usually a hierarchy). Then, acknowledging that some people simply will not be able to find information using the main structure, for example, you may organise a website with a basic hierarchical structure, then provide entry points for different audiences or tasks.

6.1.13 Tagged

A tagged pattern uses either the basic database or hypertext pattern. Each item in the site is 'tagged' with keywords, and those keywords are used to provide access to the content. The tagging may be done by the original authors of the content, the readers or by some central authority (such as the web team). This pattern works well for very large collections of diverse content, especially where the content readers will have different ideas what it is about. It can be useful in situations where people are not sure what they are looking for or what is around. The tags can help people to explore and find related information.

6.2 Labels and language

Words. In all IA work, everything comes down to the words. No matter how well you group content together or how easy it is to see on a page, the success comes down to what you call things. Words will make your IA a success, or have people staring stupidly at the page wondering what to click on. Your IA, the words you use (labelling) and how you put it all in front of people (usually navigation) are all deeply connected.

6.2.1   What labels do

As we discussed in the section about information-seeking behaviours, people come to a set of information with an idea in their head. It may be a quick task to learn something specific, or a longer research task. Either way, they have some pre-conceived ideas about what they are interested in, what they already call it, and what they hope to see. If they arrive at your information and immediately see the word that is in their head, they will click on it, learn something and be satisfied. If they do not see what is in their head, they may look around to see if there is be something similar enough, and may spend a bit of time wondering what each thing is about. But no-one likes to feel stupid (and believe me this is something that makes people feel stupid) – if they cannot figure out your labelling pretty quickly, they will go somewhere else (And if there is nowhere to go, they will just be cross at you). That is why we want to make sure our labels are great.

6.2.2   Where are labels used

Labels are all the things that describe chunks of content. They will include not only the names of items in your navigation and the hyperlinks you use in content and lists, but also the headings that describe chunks of content.

6.2.3   Characteristics of good labels

The best labels are dull, boring and completely obvious – they just work and no-one ever thinks twice about them. Often when you tell people this they look scared and almost start hyperventilating – they think their labels should be interesting and innovative. Make your content interesting and your features innovative, but do not try to break new ground with your labels. Keep them simple and stable.
The best labels:
- call things by their correct name
- are consistent
- use terms that your audience uses
- as clear as possible

6.2.4   Where to get ideas for labels
You can get ideas for your labels from a number of places:
- Content: look at the words used in your content and the labels they suggest.
- User research: your research will contain hundreds of words that describe how your audience phrase ideas and concepts. Make sure you look at your search logs – you will see exactly what people are looking for.
- Card sorting: in a card sort, the last step is often for people to provide a label describing what the group of cards is about. I often find these labels a bit long or informal to use, but they can give you some ideas.
- What everyone else does: look around at competitors or other content like yours and see what other people do. If there is a consistent approach, you can do your users a favor and use that.

6.2.5   Expect changes
Finally, expect labels to change over time. As you add more content to a site, or move things around, labels will need to change as well. Language is subtle and slight changes in words may be needed over time. For intranet work, as organizations change the labels in common use also change. Older employees remember and use the old labels, but new employees will have no idea what to use. Keep on top of the terms being used and adapt over time. Keep an eye on how people are using your site – in particular, watch search terms and see if there is any change in the terms people are using over time.

6.3 How to create an IA
Let's imagine you have done all the things we've talked about so far. You know what you are aiming to achieve for your client or business. You know about your users, what they need and how they will approach your information. You understand what your content is about. And you know lots of things about groups, classification schemes, IA patterns and labelling.
Guess what? You're ready to create the IA for your site. ("Finally!" you say.) This is the scary part of the whole process. Now you have to go and create something. If you like working stepwise through things – this leads to this leads to this – you may be wondering 'how' to step from the information you collected to come up with the perfect information architecture. Sorry, but this step is not linear (and, as you may remember from chapter 10, there is no one perfect outcome). If you like linear processes that show how you got to an outcome, you may find this a bit hard. If you are a more intuitive, creative type, this step may be easier for you. You may be more comfortable taking that creative leap and synthesizing everything into a new IA. You will probably find this fairly easy (as long as you have collected enough inputs). Here is a step-by-step guide to help you work through it.

6.3.2   Step 1: Decide what do you need to create
First, think about what you are doing at this step.
If you are working with a hierarchical pattern (or even a combined hierarchy and database pattern) you are probably trying to come up with top level groups and sub-groups. If you are working with mostly database content, you are probably trying to come up with attributes for your content.

6.3.3 Step 2: Just do it

Now, draft your information architecture. Did you expect more? Look, you have done all the preparation you need. As long as you know what you are trying to create, and you have gathered enough information about your users and content, there is no point fiddling around. At this point, the best thing is to let everything you know swish around in your head and just make something up. Yes, just have a go at it. Draft a set of top level groups or attributes. Yes, right now. Really.
Go do it – start scribbling on a piece of paper or a whiteboard, or just work through it a bit in your head. Once you get over the fear of the blank piece of paper or whiteboard and start, it will all begin to flow. Make it up based on what you already know. You will not be pulling it out of nowhere – you will be synthesizing everything you already know. But do not try to make it perfect. Just get something (or maybe a couple of things) down as a starting point. Do not agonise over trying to get the perfect answer straight away.

6.3.4 Step 3: Check it

This step is more important than the previous one. No matter how experienced you are, your first draft of an IA will not work perfectly. Again, this step is different depending on whether you are working with a hierarchy or database content.
If you are working with hierarchical content:
- Look at your draft groups. Think about what you know about your audience. (Start by thinking about just your core audience or core tasks.) Does it look like these will make sense for what they need to do? Will they understand the groupings? Will the right things be grouped together? Will they understand the labels?
- Then look at your content. Slot it into your draft groups. Does it all fit in? Does it fit in easily, or could some things be in more than one place? Is there content that does not really fit anywhere?

If you are working with database content:
- Look at the attributes of each type of content. Look at what you know about your audience and what they need. Will those attributes give them good ways to filter, sort or otherwise narrow down your content? Will they understand what each attribute actually means?
- Get a sample of the content and assign the attributes to the sample content. Can you assign it all easily? Are there some objects that do not quite work as well as others? Are there some attributes that you realize need some more work?

6.3.5 Step 4: Revise it

For both types of content, go back to step 2 and revise what you have created. Look at your draft, what you know about your audience, and your content. See if it looks like it will work. Each time you do this, first check core tasks and core content. As you revise it, start looking at the more unusual tasks and content. Go deeper and play with more detail every time.

6.3.6 Step 5: Stop

You will know when to stop revising. There is a point where you look at your draft IA, the audience needs and the content, and it just feels good. It feels simple and right and you cannot tweak it much more. Hard thinking went into it, but it looks so obvious at the end.

6.3.7 Step 6: Discuss

In a project, this is a good time to start talking to other people about the draft IA. Talk to your client, your colleagues or your subject matter experts. However, do not do it until you have

worked this right through – there is little point showing them a half-baked idea. When you talk to them, be prepared to explain how you came up with what you did. Be prepared to explain the ideas that did not work out and you threw away, and the rationale for the things you kept. But most of all, be prepared for nitty-gritty detailed questions about edge-case content and user needs.

6.3.8   Tips for this process
As a series of steps, this process is fairly straightforward. Here are some extra tips for doing it.

6.3.8.1 How many content groups?
How many content groups are too few or too many? As you may predict, there is no right answer for this – it depends a lot on your site and content.
You want people to easily find whatever they need for their current task. That involves three steps:
- looking through the list of groups1.
- ignoring the things that are not relevant 2.
- choosing between the things that might be relevant3.

6.3.8.2   Navigation design
As you draft the IA, you will have ideas for navigation. Though you should work through the IA first (to get your groups and labelling right), you cannot really separate the two. Sketch your navigation ideas so you do not forget them, but concentrate on getting the IA done at this point.

6.3.8.3   Which classification scheme to use
One thing people ask is whether they should organise their content according to an audience scheme, a topic-based scheme or something different. Apart from reminding that audience schemes are hard, it is recommended they draft both. One of them will just work out better than the other. It really is the easiest way to resolve these types of questions.

6.3.9   If stakeholders hate it
If your client, stakeholders, authors or subject-matter experts are very negative about the IA, or have fixed ideas about how you should have done it, you may want to:
- See if you have actually missed something, or taken it too far.
- Go back to the beginning for the parts that people are particularly negative about and rework it.
- It is hard to throw away existing ideas and start again, but this may be just what you need to pick up what you have missed.
- Work their idea right through using the same process as above.
- See if it works. If it does not, take detailed notes about the parts that did not work and why so you can explain it to them. As you will learn with experience, something that looks sensible and straightforward on the surface often is not.

6.3.10   Team or individual
You can do this by yourself, or with a team. If you are the same and work in a team, you could all create first drafts independently (and do at least one round of checking content and user needs) and then get together to work through the best parts of each. If you are doing this in a team, try not to fall into the trap of talking about whether you should approach it in a particular

way. For example, do not have a long discussion about whether to use 'Products and services' as a single group or a combined one. Try both out with your content and user needs and see which will look better.

6.3.11   The mechanics of the process
Are you wondering just how you should do this? Should you create a site map in a computer drawing program, a mind-mapping program, or even a spreadsheet? The only way you should not do is in front of a computer. Computer programs are great for writing down what you have come up with, but most people think more creatively when they are on their feet at a whiteboard or doing physical work like shuffling papers around a big desk. Even if you love to mind-map with a computer program, at least start by doing it on paper.

6.3.12   Make notes of your rationale
As you work through the draft IA, make a note of the ideas you discarded and why you kept what you did. This will help when you are talking with your client or team and someone asks 'why did not you do such-and-such'. You will be able to remember what you thought about and explain clearly why it did network. You do not have to create a big, formal document. Some scribbled notes will do, or even photographs of your whiteboards at various stages. I promise that as you work through ideas and discard some, you will forget why you made particular decisions.

6.3.13   IA that changes over time
Some sites will have an IA that changes over time, as many types of content are based on a cycle. For example, the conference site changes during the year as different milestones are reached. If your site is likely to change over time, in a cyclical way, or just for extra content, make sure you include that in your IA.

6.3.14   Sequencing in the IA
One other thing to think about is how you sequence the IA. In most cases, the order is fairly easy to figure out – there will be a natural order for things. Sometimes that order is by importance, sometimes groups in the IA will clump together and form natural subgroups that feel like they belong together. The absolute worst thing you can do is to sequence alphabetically – alphabetical order is fine for A-Z lists (when people are doing a known-item information task), but not for navigation items. Alphabetical order is essentially random order. Spend time figuring out a sequence that makes some sense instead of defaulting to alphabetical.

6.4 Objectives
   The study of this unit will enable you to know:
- Information Architecture patterns
- Database
- Metadata
- Hypertext
- Combined patterns
- Catalog
- Tagging
- Labels and language
- Information Architecture developments

6.5 Self-assessment questions

Q.1   Define patterns, also explain Information Architecture patterns with examples.

Q.2   How to create an Information Architecture? Discuss its process in detail.

Q.3   Define the terms 'Database', 'Metadata', 'Hypertext', and 'Catalog' with relevant examples.

Q.4   Explain Labels and languages. Also highlights the features of good labels.

6.6 Activities

After reading this unit, start to design an IA structures and common patterns for a 'Wikipedia' with the following components such as: label to different types of information, create metadata for different information resources and give hyperlinks to related information resources, etc.

UNIT-7
TESTING AND COMMUNICATING INFORMATION ARCHITECTURE

7.1 Testing and communicating information architecture

Instead of just thinking and hoping that the website will work for the users, make sure it actually will. This is called usability testing. It basically involves putting a draft of something in front of people, asking them to use it to do things they'd normally do, and checking it works for them. When you perform a usability test on something before you start to build it, you can find out what works, what does not work, and what you need to fix. It lets you see things that are not going to work and make changes before it is too late. Of course, usability testing can be done for anything. Although it is used a lot for software and websites, I have heard of retail outlets setting up test stores specifically to check changes to store layout.

For your project, you probably will not be doing usability testing on anything quite so large. You will want to test your draft IA – your groupings and labelling. Eventually these will form the main way people find information or do tasks, so it is important to get them right, and to know they are right. Usability testing at this point will not check everything you need to check for your final project. You will want to do it again more thoroughly when you have designed the navigation, page layouts and content.

7.1.1 What you want to learn

Before you start testing your IA, think about what you want to get out of your test. This will help you decide how to run it and who to involve. The main thing you will be trying to learn is that your groups are sensible and your labels are good. You may want to check that your overall approach is okay (e.g. if you have used an audience-based classification scheme, that people expect to see your information in that way and understand the audience groups).

7.1.2 When to test

Depending on your situation, you could set up a test one morning and have results that afternoon. It really is that easy to quickly test your IA. It is great to test quickly, make some changes and test again. So you really can test as soon as you have a draft IA you are happy with.

7.1.3 How it works

This type of testing is quite simple. You're going to ask people how they would do a particular task or look for particular information using your new IA. For example, if I wanted to test the IA of my conference website, ask people to find out some key things like how much it costs, what events are on particular days, and what they will get out of the conference. This testing method works best for a hierarchy pattern, simple database structures and combination hierarchy/databases (particularly for checking the top couple of levels). If you have used the subsites structure, you may want to test from the top levels, or test one or more of the subsites. It is also great for testing the focused entry points structure, as you can see which way different people approach information.it is unlikely to work for most wiki structures – they do not really have an IA to test. You can test these later when you have some content ready. It can work well for the top couple of levels of a catalog, but not so much for the deeper levels – especially ones that contain a lot of products.

7.1.4   Preparation
Before you start, you need three things:

- **A draft IA**

The first thing you will need is your draft IA.

- **Scenarios**

   The second thing you will need is a set of tasks or a list of things you know people may need to look for. In usability testing we call these scenarios, and they represent what people will do and look for during the test.

- **Participants**

   The third thing you will need is a group of people who can give a small amount of time to be involved. The participants should be people who will be using your information. The most important thing to note for this type of usability testing is that it only takes a small amount of time and commitment. Even a couple of minutes of input from people will give you some very valuable data.

7.1.5 Method
The two main ways of running this type of usability test are face-to-face or online (yes, you can do both). The advantage of running face-to-face testing is you can talk to people. Just like other user research activities, you can ask people why they made particular decisions and what terms meant for them. This type of feedback help you understand why your IA is working (or not working) instead of just letting you know it is working.

   If you decide on face-to-face testing, you will need to prepare your IA and your scenarios. The favourite way of doing this is with a set of index cards.

For the IA:

- Write the top level categories on an index card. If you have more categories than will fit on one card, just continue on another. Write large enough that you can read it at arm's length. Number each category 1, 2, 3, 4, 5, etc.
- For each top level category, write down the second level categories in the same way. Again number these, this time using the number that represents the category above, followed by a number for the current level (e.g. 1.1, 1.2, 1.3).
- Continue for all categories and all levels.
- For the scenarios, write each scenario on one card (it can be handy to use a different coloured card for these too). I also usually label these as A-Z in the corner of the card.
   Come up with a way to explain the exercise. This helps you introduce the activity efficiently and helps people understand what you are about to ask. I usually say something like:

7.1.6   Running the test
When you are with a participant, you pretty much run through the test the same way you described in your introduction. So first show them a scenario (or read it out if you like), then show them the top-level card. Ask them to choose a group. For that group, show them the next level card, and so on until there is nowhere further to go. If they choose a group and feel as if they have made the wrong choice (usually this will happen as they do not see anything that helps at the next level), go back one level and ask them to choose again. But just as you outlined in the introduction, only do this twice. After all, you want to know where they would look, not get them to hunt down the 'answer' to the scenario.

Run through the scenarios you have planned for this participant. If you feel like they are trying to remember where they saw answers instead of thinking about what they are looking for, that's a good time to wrap up. If your participant needed to go backwards at any step, you may like to ask them what happened. Ask if they remember why they chose the particular group and what they thought would be in it. Be very careful not to make them think they have made a 'mistake' – remember, you are checking how good the IA is, not how good the participant is. But by asking you will learn very useful information about what people think groups are about and how they expected to look for information. When you are finished, thank the participant for their help and let them know what happens next.

7.1.7   Recording results

As you work, record the participant's answers (this is why we put numbers and letters on the index cards). Taking notes, as it can be tricky juggling cards and writing down selections (the test moves pretty quickly). All you need to do is write down the path for each scenario.
For example:
A: 1, 1.2, 1.2.1 (no), 1.2, 1.2.6 (happy)
B: 7, 7.6, 7.6.5
A helper can also write down the comments people make as they do the test, which are usually both interesting and useful. After the test, record the results in a big spreadsheet. Put the scenarios across the top, and the IA down the sides. Then go back through all the results and tally where people looked for each scenario. Usually mark first choices with a big X and second choices with a small for some scenarios, you may find there was a consistent approach. For some, there may be less consistency. Sometimes you will find consistent answers that were quite different to what you thought would be the 'right' one.

7.1.8   Online

Preparation using an online tool will vary, depending on the tool. The following online tools that focus specifically on IA testing (all are quite new):
- TreeJack: From Optimal Workshop (http://www.optimalworkshop.com/treejack.htm)
- C-inspector (http://www.c-inspector.com/)
- PlainFrame (http://plainframe.com/)

The first two let you test the IA as a hierarchical tree. The third lets you test your IA in the form of navigation – i.e. the position of navigation bars on the screen. Create an IA before you know anything about navigation, so the tree approach works well for me, but it would be easy to mock-up a navigation approach and test with a bit more context. All follow the same idea as the face-to-face test. You upload a hierarchy (your IA) and a set of scenarios. You write an introduction test and send it out via email or include a link to it on your website.

7.1.9   Interpreting results

It is usually pretty easy to interpret the results of this activity. The spreadsheet described above, or the outputs from the tools, show a fairly clear picture of what works and what did not. When interpreting the results, think not only about what happened but why it happened. First, think about whether the overall approach worked well. Did the test show you have chosen a good basic approach to your IA (particularly if you have chosen something like an audience or task-based classification scheme)? Identify the scenarios where people looked in the same place you thought the content would be. You can probably be confident this will be a good location for that content.

For the parts that worked well, think about what made them work well and check that they worked well because the IA is suitable.

7.2   Communicating information architecture

Document your IA, but consider whether you want to show it to the client or anyone outside your immediate team – it may be better to leave it until you have designed the navigation and page layouts. In previous units we discussed about how you should design your communication around the needs of the people you will be communicating with. This is just as important for the IA as it is for all other communication.   However, do not communicate the IA to anyone outside your immediate team. Of course, you will want to explain the groups, labelling and pattern you are going to use. And you will want to describe how you came up with the groups, what will be in them, and why you know they are going to work well. But even so, you may want to hold off for a little while.   So communicate the IA after you have designed the navigation and page layouts. Show people the two things together and they can visualize how the site is going to work. it is much safer and less likely to cause confusion. Of course, that does not mean you shouldn't write anything down after coming up with the IA. Just consider who to talk to about it at this point in your project.

7.2.1   Writing it down – Sitemaps

An IA is usually documented as a sitemap (an IA sitemap is different to the sitemaps you see on websites, but shows the same sort of thing). Sitemaps can be diagrammatic or some type of list. We use two different types of sitemap, depending on the complexity of the project.

- **Conceptual sitemap**

    Similar to the diagrams, conceptual sitemap shows a high-level representation of the site and its basic pattern. A conceptual sitemap will usually show top-level headings, key pages or sections, and key relationships between pages or sections. It definitely will not show all the pages that will eventually be in the site. This sitemap will almost always be a diagram. There is no one way to draw this diagram. The shapes and connectors should be simple, and the diagram should not contain too much information. The idea behind it is to show the overall shape of a site at a glance, so do not make it too fussy.
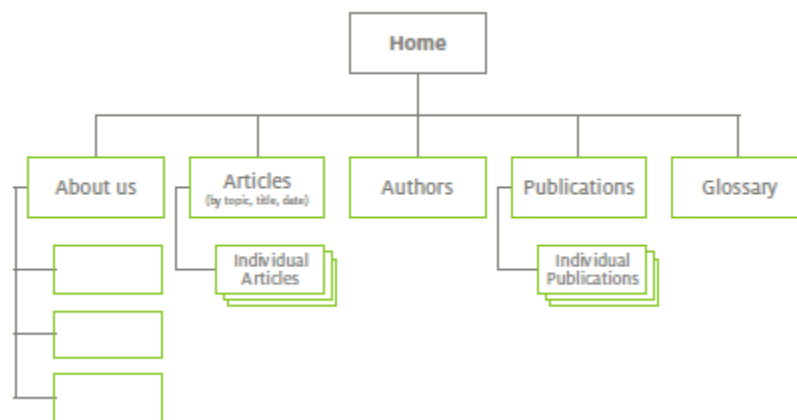

Figure 7.1: Basic shapes for drawing an IA

- **Detailed sitemap**

The second type of sitemap is a more detailed one. Rather than trying to communicate concepts, this one's all about the nitty-gritty detail. This type of sitemap can be done either as a diagram or some type of list (use a spreadsheet, but plenty of people use the outline view of something like Microsoft Word.) If you have to choose between the two, consider how hard it will be to update – for large sites, a diagram may be easy to see at a glance but inefficient to change. Even detailed sitemaps that represent a lot of content do not need much in the way of drawing shapes. Use simple boxes and simple connectors, with each box representing a 'page' in the site.
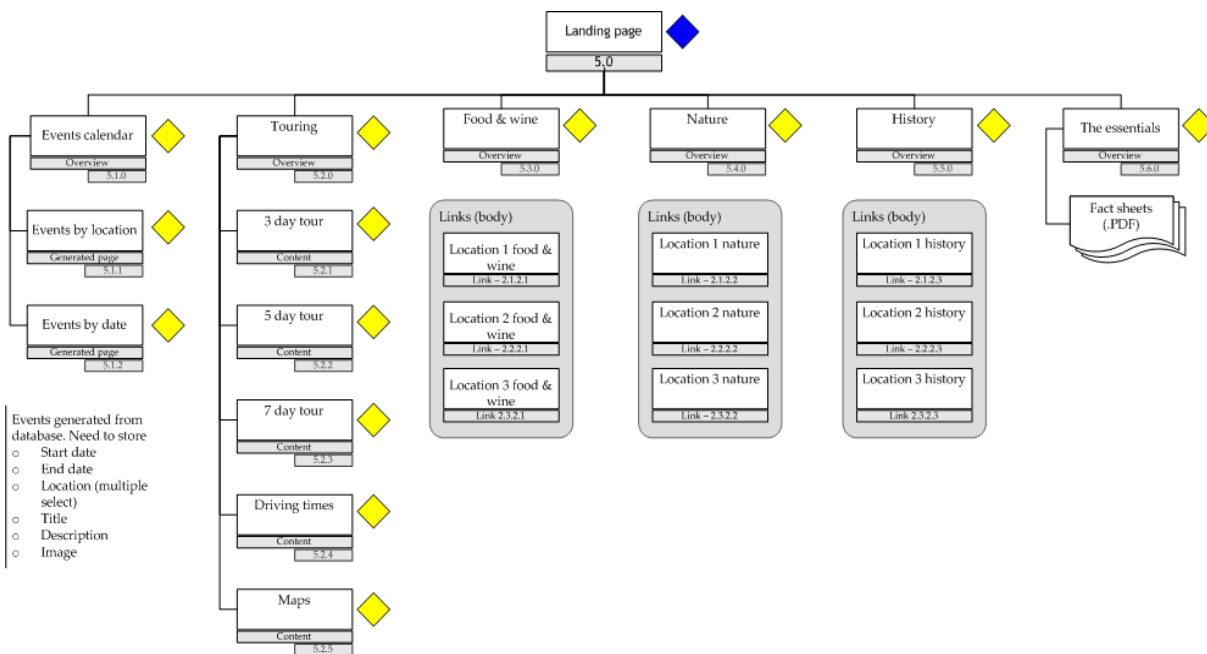

Figure 7.2: A detailed site map for a tourism website - the icons indicate which template to use, the pages are numbered to match the copybook

7.2.2 Cross links

After all, the final site will include links between key pages. Do not try to show these on the sitemap – on a diagram it is just too much information. You can include it in a spreadsheet if it is important to record key links. But the best place to identify cross links is within whatever you are using for content.

7.2.3 Maintaining the sitemap

A sitemap is necessary during a design or redesign phase to keep track of the new IA, and maybe to manage the production of the site. But the sitemap of a built site is the site itself.

The only reason you would want to keep a separate document is if you were managing the site manually (without a content management system of any type) and needed to keep track of things like owners, date last updated, date pages were added. But few people who do not use some type of content management system these days, so you probably will not need to maintain a sitemap. If you want to for some other reason, a spreadsheet will be easier to maintain than a diagram.

7.2.4   What else to include

So far we have discussed what to include in the actual sitemap. But two things are much more important to document – the rationale behind the IA, and how to maintain it into the future.

The rationale describes the reasoning behind the IA as a whole, and is incredibly useful when other people have to figure out where to add content or make changes to the IA without you around. Include information about:

- why you chose the overall approach
- what each section is about – the underlying idea
- what each section should include

If you tested the IA, make sure you include details of what you learned during the testing.

Just as important is information about what you decided not to do. Make sure you describe the ideas you threw away and why you did so. For example, if you started off thinking you'd use an audience scheme and found it did not suit the content or did not work in testing, that's really handy for someone to know. If you tried alternate labels for categories, describe why you decided against using them. This is very, very important. If you do not document these, guess what is going to happen? Some manager is going to toss out your work and use one of the crappy ideas you threw away.

Also document how to maintain the IA into the future. This is similar to the rationale as it describes the IA as a whole and what should be in each section, but it should also provide guidelines on what to do in the future. Think about the types of content that should be added, and how to choose where to locate them. Think about what would happen if the site doubled in size – how should someone manage the IA as that happens? This process also helps you check the IA is scalable and that you have considered future requirements.

7.3 Objectives

The study of this unit will enable you to know:

- the testing and communicating IA
- different usability Methods of a website
- documenting IA
- sitemaps and its types
- different scenarios

7.4 Self-assessment questions

Q1.   Explain how to test and communicate IA?
Q.2   Critically discuss different usability methods of a website with examples.
Q.3   Explain sitemaps and its different types in details.

7.5 Activities

As a usability test of your IA, check that it is working well before you design navigation and page layouts. A usability test involves:

- Deciding what you want to learn, and which parts you will test
- Preparing the draft IA
- Preparing scenarios
- Arranging participants to be involved
- Running the test
- Seeing what happened and making changes to the IA

UNIT-8
DESIGNING NAVIGATION

8.1 Introduction
Navigation refers to the methods we design that let people move around information. It includes navigation bars, hyperlinks, buttons and other clickable things.

Common types of navigation, and what they are good for, include:
- Horizontal navigation bars are great when you have few groups with short labels that are not going to change a lot.
- Vertical navigation bars are good for more groups, longer labels and more change.
- Inverted-L navigation lets you combine horizontal and vertical navigation bars for large sites.
- Tabs are just 2-level horizontal navigation bars.
- Dropdown and flyout menus let people see what is at the next level making it easier for them to jump to content and see what is in each group.
- Full pages devoted to navigation are okay for some home pages.
- Links in the body of the page, either as navigation, in context or as related links let people get to content as they are reading.

8.1.1   Navigation core
Navigation is a fairly all-purpose word that refers to the methods we design that let people move around information. It includes navigation bars, hyperlinks, buttons and other clickable things.

Navigation is more than just a way of getting people around a site. It can also:
- let people browse to the content or functionality they need
- show the context of the information
- show what is related and relevant
- help people find information they did not know about

Navigation is more than just a single bar at the top of the page. It is an entire system that combines different pieces for different needs.

8.1.2   Types of navigation
Here are some common elements of an overall navigation system.

Navigation bars: The simplest approach to navigation is a navigation bar – a horizontal or vertical bar that shows the categories of the site. Navigation bars can be used for both simple and more complex sites.

A **horizontal navigation** bar stretches across the page, usually right at the top, or beneath some sort of banner or logo. It may contain the same information on every page, or change depending on the section of the site you are in.

A horizontal navigation bar is suitable when:
- you have a small number of top-level items that can fit across the screen
- you are not likely to be adding new top-level items
- your labels are short enough to fit into the horizontal space
- you are not likely to translate the site into a language that uses long, compound words (which take up more space)
- you want to maximise the amount of page width available for content

A **vertical navigation** bar sits at the left or the right of the screen and is most useful when:

- you have more top level groups than would easily fit across a screen
- you may add or change groups over time
- some groups may have long labels
- you may want to translate the website

Vertical navigation is also good for hierarchical sites with a few levels. One of the most common navigation patterns is to display the pages for the section you are displaying, indenting the sub-categories to show their relationship.

8.1.2.1   Inverted L

By combining horizontal and vertical navigation bars we get inverted-L navigation. This pattern usually has a horizontal navigation bar that is consistent right across the site, and a vertical navigation bar for each section of the site. This approach is good for large sites, particularly those with the subsites pattern.

8.1.2.2   Tabs

Tabbed navigation is just a variation of the horizontal navigation bar, and is suited to the same types of websites. However, it will always have a second level of categories, and it is important to visually connect the two so people can see what part of the website they are in.

8.1.2.3   Drop-down

Drop-down navigation uses a horizontal navigation bar, and when someone hovers over a top-level category the second level categories are shown. The main advantage of drop-down navigation (and flyout navigation, which I will explain next) is people can see what is included in the next level category without having to click into it. This not only helps them navigate more efficiently (it is one less page to load) but also helps them understand what the site covers and what each category is about. By looking at what is in the next level, they get a better idea of the category.

8.1.2.4   Flyout

Flyout navigation is similar to drop-down navigation (showing the next level in a hierarchy without people having to click into it) except it is used for vertical navigation bars. The main disadvantage of flyout navigation is it can be hard to use, as people need to carefully move their mouse across then down. If you know your audience will struggle to select the navigation items (e.g. if they will not have the fine motor skills needed) consider a different approach instead.

8.1.2.5   Giant drop-downs

A fairly recent navigation type that's becoming more common is very large drop-down boxes containing many links. Just like normal drop-downs, the advantage is they let people jump deeper into the site without clicking through every level. And if they are grouped and laid out well they can show a few levels of the site – not just the next level.

8.1.2.6   Whole page

Some sites contain a home page that uses the whole area for navigation, usually integrating the navigation into the graphic design. In these types of sites, other pages will usually have another navigation type for the rest of the site – the home page approach does not carry through.

8.1.2.7   Page body navigation

Although we spend a lot of time designing navigation bars, people spend most of their time looking at the body of the page, using the navigation bars when the page body does not help or they already know which category to choose. But in a lot of situations, navigation happens mainly in the body of the page. Within-page navigation includes lists, indexes and summary content that leads to more detail. This style of navigation offers a lot of flexibility and variation. Within-page navigation is also particularly common for database-structure sites with a lot of content – it is much easier to use the page body than to include a long list of items in navigation bars.

8.1.2.9   Contextual links

Another way to achieve in-page navigation is via contextual links. This is common in many websites, though wikis are undoubtedly the prime example. For contextual links, here are two issues to keep in mind:

- Make sure they are clearly visible. Use a colour that fits within your brand but is different to the body text so people can tell where the links are.
- Use the tips from the chapter on labelling to make sure the links clearly describe the destination and are obvious to their readers.

8.1.2.10   Related links

Related links are a very common type of navigation item. As the name suggests, they allow access to content that is related to the current page. They allow you to highlight content you would like to expose to people, and help users to find things they may be looking for. Related links can be manually identified by content authors as they prepare their content, or automatically by the system. This is another good use of metadata – if your system lets you do it, you can automatically generate related links based on metadata from the current page.

8.2 Navigation extras
8.2.1 Introduction

This section is all about other Special navigation approaches include:

- Breadcrumb trails, which let you see where you are in a hierarchy.
- Tag clouds, which provide a way to navigate via tags (but should be tested carefully).
- Site maps and A-Z indexes, which let people jump straight to content when they know exactly what they are looking for.
- Link-rich home pages, which are great for content-heavy sites where people need to get to products quickly.
- Filters and faceted browsing, which lets people narrow down a large set of content to just the criteria they want.

8.2.1.2   Breadcrumbs

Breadcrumb trails are used on many websites – mainly hierarchical ones. The breadcrumb trail is the strip you see near the top of the website that shows the position of the current page in the hierarchy. They can help people understand the current page by showing the section it belongs to, which often provides context and a better understanding of the content. Breadcrumb trails can also give people an easy way to move to a broader level of the website - handy when they land in

the middle of the site as the result of a search. Breadcrumb trails are definitely an addition to your main navigation scheme.

When designing a breadcrumb trail:

- Include all levels of the website.
- Place the breadcrumb trail beneath the banner and navigation, but above the page content.
- Hyperlink everything except the current page.
- If you want to show the relationship between the items, use the » (Alt+0187) character instead of the >> (greater than) to avoid screen-reading software saying 'greater than, greater than'.

8.2.1.3   Tag clouds

Tag clouds are used in websites that use tagging to describe content. A tag cloud shows a visual representation of the tags. In most implementations, the size of each item in the cloud relates to how commonly the tag has been used (with larger sizes showing they have been used more often). This is one area where you really should do usability testing and make sure your users know what is going on.

8.2.1.4   Site maps

Site maps serve two different audiences:

- Humans (yes, people) who want to see everything at a glance and avoid going step-by-step through the site. This is a fairly common behaviour when people know what is available but are not sure which section it is in.
- Search engines (not people) that can more easily see what content is in a site and get to all the pages.

8.2.1.5   Big footers

A fairly new trend, and one that often eliminates the need for a site map, is to use a large footer at the bottom of every page. This section, like a site map, helps people to jump between content pages and search engines to find content. If you want to list everything, they are suitable only for small sites. But they can be used on large sites to list the main areas of the site.

8.2.1.6   A-Z indexes

An A-Z index lists out key content in an alphabetized list. A-Z lists are very useful for the known-item information – when people know exactly what they are looking for and what it is likely to be called. They are also a good way to help people understand the difference between their terminology and technical terms (by displaying the two together) and adapt to new terms over time. As with site maps, A-Z indexes also help search engines to locate content.

8.2.1.7   Link-rich home pages

For some large websites the main goal of the home page is to help people get to the content they are interested in. (Some home pages are designed to reinforce a brand, send people in a particular direction – anything but help people get to content.) A good approach can be to include lots of links on the page. This is called a link-rich page and is a great way to let people jump straight into content. More links provide more opportunity for readers to spot the content they are interested in and follow a link. The main challenge with link-rich pages is that they need to be well-organized visually. The links need to be grouped well, labelled well and easy to read.

8.2.1.8 Filters

Filters allow people to narrow down a large set of content. They are great for content sets, where the content has a range of attributes and people may want to approach the site with different starting points. A good filter will let you choose the criteria that matter to you and see results that match just those criteria. To design a good filter, you really need to know a lot about your audience and what matters most to them. As with other aspects of IA, labelling is also very important.

8.2.1.9 Faceted browse

Faceted browsing is a particular type of filter. Instead of choosing a set of attributes like a filter, you browse step-by-step, narrowing down the result set with each step. You do not have to enter a search term, can start narrowing down with any attribute and can never get a zero result (something that can happen with other filters).

8.3 Designing navigation
8.3.1 Introduction

When you are ready to design navigation for your site, do not start with the home page. Start with the content page – identify what people need to do on that page and design navigation that suits it. Then design the pages that lead to content pages, and then finally design the home page.

8.3.1.1 Start with the content page

Believe it or not, the home page is not the most important page on your site. So when you start designing your navigation system, this is the best place to start. There are two reasons for this:

- The content page is where people will spend most of their time. it is where they will have success or failure, and most likely where they will be when they want to move to another page in your site.
- It will probably be the first page people see. It depends on the type of site you are working on, but in a lot of cases people come from a search engine. Where do they land? More often than not on a content page. And when this happens the content page is effectively the home page to your site.
  Start working with the main content type for your site (or types if you have more than one). But before you start to draw anything, go back to everything you learned (from your goals user research and content analysis) so you know:
- What needs to be on this page.
- Where people will want to go next – will they want more detailed information or other information on the same topic.
  If people need to move between different sections of the site, or whether they are more likely to explore everything in the current section.
- Where you would like them to go next – to related products, more expensive versions of the same product, etc.
- Whether it matters if they do not go anywhere and just jump in • and leave
  One way is to start with the most important goal or information need, the product that creates the most revenue, or the function that's most frequently used or requested by people. Get this working, and then see if it needs to be varied for different content or different goals. Once you have a set of pages roughly assembled, revisit the goals and needs.

Once you have thought about it, start sketching. Draw what needs to be on the page, and sketch out navigation approaches that will help people do what they need to for this page. Do not try to get it 'right' – try lots of different approaches and ideas.

8.3.2   Next, work on the pages that link to content pages

When you have got some scribbles for the content page, start with ideas for the pages that would link into the content pages. You may have several types of these pages:

- For simple hierarchies, the page may just need to list out the content in the section.
- For database structured sites, you may have more than one way to get to the content.
- You may design gallery pages or comparison pages.
- Do not forget to think about A-Z indexes, site maps and other helper pages.

These are crucial pages in your site – they are the places where people will make a decision to click on a content page. Get these wrong and people will not click through. As with the content page, sketch. Draw different approaches to these pages and how people would experience them. Think of the different types of tasks people will be doing, and the decisions they will be making at that level and design for that. Depending on the structure of your site, you may have another level of index pages, linking to the pages that link to the content. Tackle these in the same way.

8.3.3   Then do the home page

When you have finished sketching your content pages and index pages (pages that lead into content pages) then do the home page. Honestly, if you start on your home page you will spend so much time on it you will not allow enough time for the other page types. Not only that, you risk designing navigation that only works if people work from the home page inward.

Home pages generally need to:

- Communicate who the organization is
- Highlight particular content or features
- Allow people to navigate to where they want to be
  When you design navigation for the home page, you will be designing more than just navigation bars. For many home pages, everything is ultimately navigation to content deeper in the site. When designing home page navigation, think about:
- How much of the navigation you have designed for other pages is relevant to the home page? For example, if you use top and left navigation within the site, you may only need the top navigation on the home page.
- Is there anything on the home page that is not for navigation? (And should there be?).
- What needs to be on the home page, and what does it navigate to? For example, you may want to include news, links to individual articles, campaign advertisements that link to campaign pages, quick links to key pages, etc.
- What do you know that may be difficult for people to find, and so deserves some home page space to help them?
- Home pages are difficult and frustrating to design. Not because they are inherently hard to lay out, but because everyone has an opinion about how to do them. More than any other type of page, sketch lots of versions and be prepared to make changes. But also be prepared to use what you know about the project goals and people's needs to push back on some suggestions and explain your decisions.

8.3.4   Revise
Just as you did when you designed your IA, after you have sketched your content pages, index pages, special pages and home page, revise them:
- Think about the business goals, people's needs and the content, and make sure the navigation will support it.
- Check that the navigation will support the IA well.
- Sketch and tweak and check it until you are comfortable it will work for your site
- If you are wondering whether to take one approach or another (top navigation or side, no navigation bars, large footers) try them all – work through the whole site, see what would happen, and see what works best.

8.4 Objectives
The study of this unit will enable you to know:
- Designing navigation and various types of navigations.
- Navigation extras (i.e. Tag clouds; Site maps; A-Z indexes; Link-rich home pages; Filters and faceted browsing).
- Designing navigation of website.
- Content page of a website.
- Home page of a website.

8.5 Self-Assessment Questions
Q.1   Define the term 'navigation'. Also explain different types of navigations with relevant examples.
Q.2   How to design navigation of website? Discuss with examples.
Q.3   What do you understand by the term 'navigation extras'? Discuss.
Q.4   Explain the navigation extras and its major types with relevant examples.
Q.5   Explain website's 'home page' and 'content page' in details with suitable examples.

8.6 Activities
Consider yourself as an expert of IA, design navigation for a library website with different approaches to help people get their information needs around your site. Also give guidelines how to test it and communicate it.

UNITE-9
TESTING AND COMMUNICATING NAVIGATION

9.1.1 Introduction

To test the navigation, I'm going to suggest the exact opposite – that you test it with real content, and as much of it as possible. The main reason is that although we design things like navigation bars, most navigation happens within the body of a page, much of it via contextual links. To properly test the navigation, you need to test these links and the content around them. Of course, you will also want to check that your navigation bars, tag clouds, breadcrumbs and other navigation elements work as well. Usability testing for navigation and page layouts is similar to usability testing for a draft IA. But you will be trying to test more – the labelling, navigation design, page layout and content. It is more detailed, and a much bigger test than just a quick test against a hierarchy.

9.1.2   Get help

For testing your navigation and content, I think it is better if you do get some help or learn some more. On the surface, usability testing looks easy – put people in front of the site and watch them work. But it is also easy to make mistakes and not know you have made them. Poorly-written scenarios can lead to answers that do not reflect real-world use. You may struggle to not tell someone what to do when they get stuck. You may have trouble figuring out why people are having problems. And it can be very easy to misinterpret what happens. It is strongly recommended to do usability testing – it is the only way to make sure you have actually done a good job for the people who will use your site. You will have made mistakes (I still do) and it is the best way to pick them up.

9.1.3   What you want to learn

For a usability test of your navigation and page layouts, you can be testing practically everything in the site. I suggest you focus on checking:

* Does the IA still work now it has been made into navigation?
* Can people see the main navigation bars and know how to use them?
* Do people notice and use other navigation elements such as related links?
* When do people use navigation elements other than • contextual links?
* Where it is relevant, can people use within-page navigation elements such as comparison features?
* If you have used something less common, such as faceted browse, how well do people understand what to do with it?
* What content works well (and what does not work quite so well)?

You may want to focus on areas you found hard to design, or where there were a lot of comments and changes as you worked through the navigation design.

9.1.4   When to test

The best time to test will be after you have content prepared. You may not need all the content you will eventually have in the site, but the more content you have, the more you will get out of the test. If you know some of your content will take a while to get ready, do not think it is necessarily to delay your testing. Run an initial test on whatever you have so you can get feedback earlier rather than later. You can always test again when more content is ready. If you

haven't finished the graphic design, you can test without it – use a fairly plain visual approach, or even test a black and white version. You will need to test again with the graphic design finished to make sure people can still see and use key features. But as with the content, do not delay your testing until the graphic design is finished – it is better to get some feedback rather than wait.

You do not necessarily have to build the whole site to test it. A rough working prototype can be good enough, again to get some initial feedback and make sure you are on the right track.
It is recommended that create a basic computer-based prototype – it does not need advanced features like search, login areas or within-page updates. Just keep it simple and static so you can get some feedback easily. If you are using a content management system, it may be easy to create a draft site to test. Otherwise, a basic HTML prototype may be good enough.

9.1.5 Preparation
Preparation is similar to the IA testing. You will need:
- a draft site (real or prototype)
- scenarios
- participants

The only real difference is that testing the navigation and pages will take longer than IA testing. People will be actually working through the scenarios instead of just telling you where they would look and reading the content. Plan for the test to take longer – anything up to an hour is normal and gives you a lot of good feedback. You can do the testing face-to-face or remotely1. Face-to-face testing is always best as you can see how the participant is reacting during the test. However, remote testing is great if you cannot meet people face-to-face. Remote testing uses screen-sharing software and a voice connection (phone or internet-based) so you can see what the participant is doing. The available tools are getting better and better, and it is a good option that makes usability testing a lot more accessible.

9.1.6 Other tips
Other tips for testing navigation and pages:
- Do not start all your testing from the home page. Start from somewhere inside the site occasionally to mimic what would happen if someone landed in the middle from a search engine (or followed a link from another site).
- Ask participants to think of things they would want or expect to find on the site and try to locate them. You can learn some interesting things about users' expectations for site content and relationships.
- As participants work, occasionally ask them what they expect to find behind different links. This can give you great clues about how people interpret terminology when they first see it.
- If people consistently use search during the usability test, think about rewording your scenarios. They may be just trying to put in a scenario keyword instead of thinking about what they want to find.
- If people do not click on something you expected them to, wait until the test has finished and then ask them if they noticed it and what they thought it was. You may learn that it did not look like navigation, that people did not look at that part of the screen, or that the terminology was poor.

- If half of your participants look in one place and half look in another, ask them what they thought would be in the section they did not look in. You may learn something important about the group or labelling.

9.2 Communicating navigation
9.2.1 Introduction
Navigation and page layouts are commonly drawn and documented as wireframes.
Wireframes are design drawings without any visual treatment. They are usually done in simple lines, with few colours. Their purpose is to show what will be on a page, without final graphic design or interaction. Wireframes themselves are not particularly hard to draw – they are just lots of straight lines and text. And you can do them in any drawing package – Visio, Illustrator, InDesign or one of the many online prototyping tools.

9.2.1 How much detail to include?
I have mentioned this in other chapters on documentation, but it is very important when talking about wireframes – the amount to draw, and the amount of detail to include depends on the purpose and reader of the wireframe. Wireframes that give a management-level stakeholder a broad idea for the shape of the site should contain a lot less detail than ones showing a developer how to build the site.
- Wireframes will be used by a wide range of people on a project. The main readers, and their main concerns include:
- Project team: To discuss different ideas and approaches.
- Subject matter/content authors: How will their content fit into the site and be represented in it? What parts of a page do they have available?
- Managers: Have you met business needs? (And "where's my stuff on the home page?")
- Developers: Exactly how should this work, and how will I implement it?

9.2.3 Reference zones
The wireframe above shows very broad content zones only. This type of wireframe is good for:
- discussing big ideas without worrying about detail
- showing the high-level approach across a whole site – highlighting consistent and different placement of elements
- exploring different layouts with a team
- discussing high-level flows and ideas without getting into detail
When you use this type of wireframe, make sure people understand it is only meant to communicate broad ideas a positioning, or they may wonder why you have not 'finished' the work. Also keep an eye out for whether people understand you – many people find these types of wireframes hard to understand as there is not enough detail for them to work with.

9.2.4 Detailed
This type of wireframe shows as much detail as will appear in the final site. It will include final wording of all navigation items and all content. As you can imagine, you probably will not use this type of wireframe for every page in your site – creating the content for every page is just too much work. But it is great for special pages where the full details need to be spelt out (particularly any interactive pages), and as an example of particular page types.

When you use this type of wireframe, you will probably want to introduce ideas with something broader before showing this type of detail. It is easy (and common) for people to get distracted by irrelevant details (like wording of content) and forget to focus on the more important aspects of the design.

9.2.5   Combination
Wireframes do not have to be only broad, or only detailed. The next example shows a combination of both. It does not show the content, but it does show all the headings and the layout. This wireframe helps people focus on what you want to discuss or show – the less important parts are not shown in as much detail.

9.2.6   Specification wireframe
The final type of wireframe is even more detailed. Not only does it have all the interface details, it also has enough annotations for a developer to build it without having to ask you anything. This type of wireframe is necessary when you are ready to have a system built. Developers need to know exactly what text should appear on the screen, where the data comes from and goes to, and what action occurs for every link and button. They also need to know about any variations that might occur if the data is longer than it looks, and how the individual screen will work.
Believe it or not, the wireframe above contained enough detail for the developers to build. It was never written down in any more detail than this. What made it work is that we all worked through the design process together, and so had a common understanding of what needed to happen. It was built within a few days of sketching, and because it was so recent, everyone remembered exactly what all the strange squiggles were about. The only changes made after the build was to change some of the on-screen text that was not properly defined in this version.

9.2.7   Page description diagrams
A quite different way to communicate page layout design, and one that works particularly well when you are working with graphic designers, is a page description diagram. This is an 'anti-wireframe' in that it does not include any drawings at all. Instead, it describes the elements of a page in words. It lists what needs to go on a page, and describes which parts are the most important and need the most emphasis.

9.2.8   What to include in a wireframe
Drawing your wireframes is one of those tasks that is never quite finished. You can keep refining them, adding more details and annotations, until the cows come home.
To avoid this, think of your wireframes as being made up of three levels:
- Absolute essentials: Those things the wireframe will be useless without. When you are pressed for time, or already working closely with the people who need to use the wireframe, this is where you can stop.
- Explanations: Things that are not essential, but will help. people understand what the wireframe is about – annotations, background information, important things to pay attention to.
- Information design: Better visual approaches, so people can more easily understand what you are communicating.

9.2.9   Prototypes

A prototype is a more interactive version of a wireframe. It can be done on paper or on a computer – the key is that people can do something other than look at it.As with wireframes, the amount of detail you will include in a prototype depends on what you need to communicate and who you are communicating with. Paper prototypes are great for showing initial ideas and how someone would move through a site (but are tedious to make if you want to include all page detail). Detailed computer prototypes can mimic the final site well enough that you can really demonstrate how the site will work.

9.2.10 Tools and templates

Following are the prototypes drawings tools to start with:

- Eightshapes Unify: This is an InDesign-based documentation system. It contains templates, common page layouts and symbol libraries to get you started. http://unify.eightshapes.com/about-the-system/
- Konigi wireframe stencils: For OmniGraffle, this contains a broad set of components to use in wireframes. http://konigi.com/tools/omnigraffle-wireframe-stencils
- Nick Finck's stencils: This is similar to the Konigi stencil set, but for Microsoft Visio: http://www.nickfinck.com/blog/entry/visio_stencils_for_information_architects/
- Balsamiq: This prototyping tool is currently the most popular, allowing you to create simple sketchy prototypes online.
- Axure: Very established software for creating clickable prototypes: http://www.axure.com/
- Microsoft Sketchflow: At the far end of the prototyping spectrum is Sketchflow, which lets you create everything from quick sketch-style prototypes through to quite complex interactive prototypes with re-usable code.

For more: http://articles.sitepoint.com/article/tools-prototyping-wireframing

9.3 Objectives

The study of this unit will enable you to know:

- How to test and communicate navigation
- Usability testing
- Wireframe and its types
- Prototypes
- Different online tools and templates
- Page layouts

9.4 Self-Assessment Questions

Q.1   Explain the steps taken while testing the website.
Q.2   What is navigation? Also, explain how to communicate navigation.
Q.3   Define prototype and its various types.

9.5 Activities

After reading this unit, design Wireframes for a business website with detailed information.